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ABSTRACT

A policy-focus Delphi study was conducted to identify the barriers which prohibit handicapped students from entering or completing vocational technical programs in community colleges in Texas and to identify recommendations and tasks relating to the removal of these barriers. A seventy-two member participant group, which included a nineteen member steering committee, identified 29 tasks which might be implemented or considered for policy formulation by community colleges. These 29 tasks resulted from a content analysis and distillation of the group's 351 recommendations which had evolved from their 198 identified barriers. Fourteen of the 29 tasks correlated with 18 barriers identified by a majority (66%) of the participants as being the most severe. Ratings of desirability, feasibility, and cost effectiveness of implementing the tasks were derived and verified by the steering committee. (Tables include a listing of the barriers, recommendations, and ratings of barrier severity and implementation feasibility.) (JH)

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ASSISTING HANDICAPPED STUDENTS IN VOCATIONAL TECHNICAL PROGRAMS IN COMMUNITY COLLEGES

Identification of Barriers

Recommendations for Removal of Barriers

Tasks to Be Implemented

BEST COPY AVAILABLE

A Final Report of Research Performed
in Cooperation with the

Division of Occupational Research and Development
Department of Occupational Education and Technology
Texas Education Agency

and the

College of Education
Texas A&M University

TEA Contract No. 89230066

by

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November 1978

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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The actual success of the study was due to the valuable contributions made by the seventy-two member participant group, which included the nineteen member steering committee. Each of the participants was sincerely interested in assisting the handicapped student in succeeding in community college vocational/technical programs, and because of this dedication, contributions made by this group far exceeded the usual contributions made by participants of a research study.

Members of the steering committee set the pace and supported the project director and principal investigator to the very end of the study. Although it is impossible to name all of the members of the participant group, members of the steering committee were as follows: Stanton Calvert, Texas College Coordinating Board; Paul Clayton, Paris Junior College; Howard Duhon, Lee Community College; Elizabeth (Buffy) Fetter, Eastfield Community College; Lynn Hill, San Antonio Junior College; Bettye Lacy, Fort Sam Houston I.S.D.; Paul Lindsey, Southwest Texas State University; Curtis T. Liston, Texas State Technical Institute; Eleanor Mikulin, Special Education, Texas Education Agency; Jamieson H. B. Newell, San Antonio Junior College; Rue Tillery, Fort Sam Houston I.S.D.; Ron Trull, Texas Rehabilitation Commission; Sue Yoselow, El Centro Community College; Gilmore Williams, Austin Community College; and Troy Williamson, Paris Junior College. Two other members, William Henderson, Management Services Associates and Roland A. H. Benson, Postsecondary Programs, Occupational Education and Technology, Texas Education Agency, moved out of the state before the research was completed, but they were most helpful in the early part of the study.

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Joan Shirley Jernigan

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CHAPTER I

INTRODUCTION

Aided by increased federal legislation, handicapped citizens are becoming more assertive and are seeking more active social roles. One is the role of the student. Due to this trend, the numbers of handicapped adults seeking education will expand significantly (Shworles, 1977). Another trend, "normalization", is a movement to assist the handicapped persons to function in the mainstream of society by increasing their ability to cope and changing the perception of society toward the handicapped. "Normalization" also means assisting the handicapped person to function in educational programs available to the nonhandicapped (Phillips, Carmel and Renzullo, 1977). These trends have created pressures on educators to provide handicapped adults with the vocational skills that will assist them in becoming independent members of society.

Background for the Study

Leaders in education and rehabilitation are becoming increasingly aware of how vital community colleges are in providing vocational training for the handicapped (Shworles, 1976). Although several research projects have identified architectural barriers at community colleges, other barriers which exist may be even more serious than the architectural ones. The identification of the non-architectural barriers and a compilation of recommendations to implement instructional techniques and procedures which might help handicapped persons succeed in vocational programs in community colleges in the state of Texas, should assist this group of citizens receive appropriate occupational training, and thus enhance their chances of functioning at their full potential.

Because handicapped students need the vocational training that community colleges can provide, state agencies across the nation have begun to identify the problems handicapped students encounter in this setting. As a result some states are beginning to implement programs and help handicapped students succeed in these institutions. In 1977, the Wisconsin Vocational Studies Center studied vocational, technical and adult education (VTAE) in post-secondary institutions and identified three kinds of barriers: barriers to enrolling in vocational programs, barriers to completing vocational programs, and barriers to receiving successful instruction. Their results indicated that barriers to enrolling include a lack of public awareness about what handicapped students need and can do, the handicapped students' inadequate self-confidence, fear of trying, and poor self-image, and the dependency on others created by all institutions. Findings of the study further indicated that barriers to completing vocational programs included slow progress as compared with other students and a resulting discouragement, an extra effort required for mastering a skill and the resulting frustration, a lack of self confidence, and a tendency to view themselves as failures (Kumar, 1977).

To help students overcome these barriers, community colleges in California have accommodated handicapped stduents with "enablers", that is, trained personnel who provided counseling, transportation, assistance with registration, courses in independent living skills, reference materials, adaptive devices, equipment and general advocacy for handicapped students (Phillips, et al., 1977).

Handicapped students attending post-secondary schools in Texas lack such a support service. For almost a decade, Texas had been engaged in an intensive statewide program to mainstream handicapped students into "regular" classes whenever feasible (Administrative Guide and Handbook for Special Education, Bulletin 711, Texas Education Agency, March 1973), but so far this program has been confined to elementary and secondary education. The Texas Rehabilitation Commission (TRC) has assumed the major responsibility for assisting the handicapped in community colleges. During fiscal year (FY) 1976, for example, an estimated 14,000 clients of TRC were in institutions of higher learning; this figure represents nearly one-half of TRC's entire clientele. Because of the variety of vocational technical courses offered, TRC placed many of these 14,000 clients in community colleges (Status Report of General Special Programs, Texas Rehabilitation Commission, FY 1976).

These 14,000 students are legally supported by Section 504 of the Vocational Rehabilitation Act of 1973 (Federal Register, Vol. 42, No. 86, May 4, 1977). Signed by Health, Education, and Welfare Secretary Califano in April, 1977, the law places a stringent time table on colleges and universities to make their campuses accessible to the handicapped as follows:

Project Required	Deadline	Resultant Date for Completion
Making programs accessible (with the exception of structural modifications that may be required) Section 84.22	"within 60 days"	August 2, 1977

Project Required	Deadline	Resultant Date for Completion
Making initial notifications regarding the institution's commitment to nondiscrimination on the basis of handicap Section 84.8	"within 90 days"	September 1, 1977
Completing a "transition plan" for changes in facilities that are needed to achieve program accessibility Section 84.22	"within 6 months"	December 3, 1977
Completing an "institutional self-evaluation" of the institution's non-discrimination program (to be maintained on file" Section 84.6	"within 1 year"	June 3, 1978
Maintaining records of the above institutional self-evaluation Section 84.6	Records of the self-evaluation, as specified, must be maintained for 3 years from completion	
Assuring the Office of Civil Rights of compliance with the requirements Section 84.5	To be determined--once the assurance form has been developed by the Office of Civil Rights and made available to institutions a due date will be known.	
Making facilities accessible according to structural modifications included in the transition plan Section 84.22	"within 3 years"	June 3, 1980

(Biehl, 1978, p. 8)

The 504 regulations also prohibited discrimination against the handicapped person in admissions, treatment, academic adjustments, housing, health and insurance, financial and placement services. To date, however, no funds have been appropriated for carrying out these regulations.

Current journal articles document the need for removing barriers and providing services to handicapped students at the post-secondary level. In an article written to allay educators' fears of providing services for the handicapped, Hessler (1976) described programs provided by the Special Services Office of the United States Office of Education. He also discussed the need for campus-wide advocacy for attendant and reader pools, wheelchair and equipment repair, mobility assistance, accessible housing, and skills for self-reliance. In a study of faculty attitudes toward handicapped students, Newman (1976) confirmed that a "much more serious problem (in addition to architectural barriers) presented by handicapped persons was the difficulty in learning and communicating" (p. 197). Rothman (1968) discussed how community college staff, particularly counselors and nurses, could assist the handicapped student in demonstrating ability.

Shworles (1976) indicated that "The public community college is the most significantly useful ally capable of responding to . . . a national need for articulation between vocational rehabilitation and education" (p. 8). As a handicapping condition of adults and adolescents, learning disabilities present a special challenge at the community college level. Wiig (1972) suggested employing special teaching methods and equipment similar to those employed for secondary students. With expectations of stimulating more programs for handicapped students, Lawrence, Krieger and Barad (1972) described how curriculum could limit students, the problems students have in socially adjusting, and other specific academic and architectural barriers.

Review of the literature regarding recent research indicated that barriers other than architectural have been identified in community colleges, and identifying barriers which prevent handicapped citizens from entering or completing vocational programs is needed before educators can provide the necessary services and courses of action to overcome these barriers (Phillips, et al., 1977).

Overview of Texas Community College Vocational Education Programs

The Associate Commissioner of Occupational Education and Technology administers three divisions of the Office of Instructional Programs. One of these divisions is post-secondary vocational education. Although part of the community college program, the policies of this division are established by the State Board of Education rather than the Coordinating Board, Texas College and University System. However, politicians and educators continue to seriously consider placing post-secondary vocational programs under the direction of the Commission of Higher Education (Haynie, 1974).

William Grusy, Director of Post-Secondary Occupational Education and Technology, defined post-secondary vocational technical education as programs leading to occupational competence in engineering, manufacturing, industry, science, research, business, health occupations, agriculture or distributive occupations. Although many programs also lead to an associate degree, all post-secondary vocational programs are designed to prepare persons for immediate employment (Grusy, 1977).

In addition, the adult and continuing education programs in community colleges in Texas include short-term preparatory classes, supplementary classes to increase job skills, and apprenticeship programs. The adult and continuing education programs are a part of the Department of Occupational Education and Technology, but are administered separately from vocational technical education at the state and local levels (Allen, 1977).

Sixty-seven community colleges and technical institutes in Texas offer a wide range of vocational technical courses in the broad areas of agriculture, distributive education, health occupations, homemaking, industrial education, office education, service areas, and technical areas (Figure 1). Course offerings are determined by the needs of the local community (Haynie, 1974).

Statement of the Problem and the Purpose of the Study

Legislation such as Section 504 of the Rehabilitation Act of 1973 (Federal Register, Vol. 42, No. 86, May 4, 1977), known as the "bill of rights" for the handicapped individual, is the result of a movement toward "normalization" to make more of the conditions of everyday life available to handicapped persons. Also, handicapped persons are becoming more assertive by forming advocacy groups to obtain their rights as citizens; among these individual rights are the rights to an education which leads to employment and independence (Phillips, et al., 1977).

Projects have been identified which were designed to assist community college vocational students to achieve vocational skills, such as the project at McLennan Community College in Waco, Texas (Kelley, 1977). There has not been, however, an organized effort to identify handicapped persons who are potential vocational students, programs which would accommodate them, or barriers which impede their successful entry or completion of such programs.

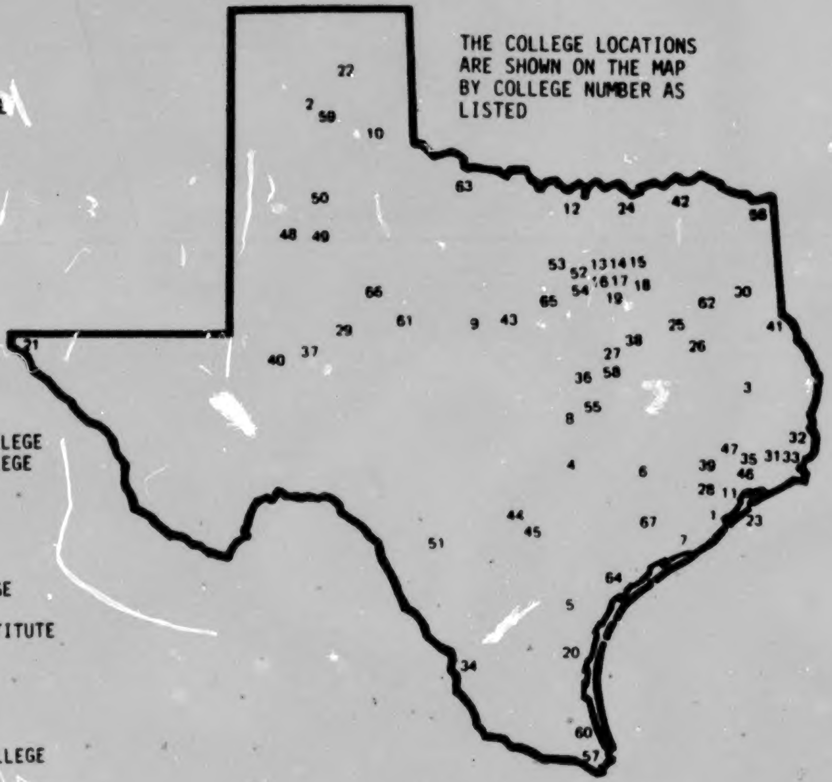
1. ALVIN COMMUNITY COLLEGE
2. AMARILLO COLLEGE
3. ANGELINA COLLEGE
4. AUSTIN COMMUNITY COLLEGE
5. BEE COUNTY COLLEGE
6. BLINN COLLEGE
7. BRAZOSPORT COLLEGE
8. CENTRAL TEXAS COLLEGE
9. CISCO JUNIOR COLLEGE
10. CLARENDON COLLEGE
11. COLLEGE OF THE MAINLAND
12. COOKE COUNTY COLLEGE
13. BROOKHAVEN COLLEGE
14. CEDAR VALLEY COLLEGE
15. EASTFIELD COLLEGE
16. EL CENTRO COLLEGE
17. MOUNTAIN VIEW COLLEGE
18. NORTH LAKE COLLEGE
19. RICHLAND COLLEGE
20. DEL MAR COLLEGE
21. EL PASO COMMUNITY COLLEGE
22. FRANK PHILLIPS COLLEGE
23. GALVESTON COLLEGE
24. GRAYSON COUNTY COLLEGE
25. HENDERSON COUNTY JUNIOR COLLEGE
26. HENDERSON COUNTY JUNIOR COLLEGE ANDERSON CENTER
27. HILL JUNIOR COLLEGE
28. HOUSTON COMMUNITY COLLEGE
29. HOWARD COLLEGE AT BIG SPRING
30. KILGORE COLLEGE
31. LAMAR UNIVERSITY
32. LAMAR UNIVERSITY AT ORANGE
33. LAMAR UNIVERSITY AT PORT ARTHUR
34. LAREDO JUNIOR COLLEGE
35. LEE COLLEGE
36. MCLENNAN COMMUNITY COLLEGE
37. MIDLAND COLLEGE
38. NAVARRO COLLEGE
39. NORTH HARRIS COUNTY COLLEGE
40. ODESSA COLLEGE
41. PANOLA JUNIOR COLLEGE
42. PARIS JUNIOR COLLEGE
43. RANGER JUNIOR COLLEGE
44. SAN ANTONIO COLLEGE
45. ST. PHILIP'S COLLEGE
46. SAN JACINTO COLLEGE CENTRAL CAMPUS
47. SAN JACINTO COLLEGE NORTH CAMPUS
48. SOUTH PLAINS COLLEGE
49. SOUTH PLAINS COLLEGE AT LUBBOCK
50. SOUTH PLAINS COLLEGE AT PLAINVIEW
51. SOUTHWEST TEXAS JUNIOR COLLEGE

TARRANT COUNTY JUNIOR COLLEGE DISTRICT

52. NORTHEAST CAMPUS
53. NORTHWEST CAMPUS
54. SOUTH CAMPUS
55. TEMPLE JUNIOR COLLEGE
56. TEXARKANA COMMUNITY COLLEGE
57. TEXAS SOUTHMOST COLLEGE

TEXAS STATE TECHNICAL INSTITUTE

58. JAMES CONNALLY CAMPUS
59. MID-CONTINENT CAMPUS
60. RIO GRANDE CAMPUS
61. ROLLING PLAINS CAMPUS
62. TYLER JUNIOR COLLEGE
63. VERNON REGIONAL JUNIOR COLLEGE
64. THE VICTORIA COLLEGE
65. WEATHERFORD COLLEGE
66. WESTERN TEXAS COLLEGE
67. WHARTON COUNTY JUNIOR COLLEGE



THE COLLEGE LOCATIONS ARE SHOWN ON THE MAP BY COLLEGE NUMBER AS LISTED

FIGURE 1. TEXAS COMMUNITY COLLEGES AND TECHNICAL INSTITUTES OFFERING ONE AND TWO YEAR PROGRAMS (A CHALLENGE AND A CHOICE, 1978)

This study, which has employed the exploratory research techniques described by Kerlinger (1967), attempts to answer in detail the following general research questions:

1. What are the barriers within the school setting (other than architectural) that keep handicapped students from entering or from completing vocational training in community colleges?
2. How severe are the barriers?
3. What are the tasks necessary for removing the barriers?
4. Which recommendations can be considered most feasible to implement?
5. How do the ratings of feasibility for removing barriers by "experts" compare to the ratings by "consumers" or handicapped students?
6. What is the criteria for successfully completing a community college vocational program by a handicapped student?

In summary, the primary purpose of the study was to identify the barriers which prohibited handicapped students from entering or completing vocational programs, and to identify the critical tasks necessary to overcome these barriers. Information resulting from this study should assist community colleges and agencies such as the Texas Education Agency, the Texas Rehabilitation Commission and the Commission for the Blind to implement programs or services to help handicapped students successfully complete vocational training programs at the community college level.

Definition of Terms

Barrier: any obstacle which prevents access or produces separation (The Compact Edition of the Oxford English Dictionary, 1971). For this research, barriers will be synonymous with "discriminating practices" described in the regulations for implementing Section 504 of the Rehabilitation Act of 1973. In the same regulations, "program accessibility" and "reasonable accommodation" relate to the removal of barriers (Federal Register, Vol. 42, No. 86, May 4, 1977).

Consumer Group: handicapped students in vocational technical programs in community colleges in Texas who would be consumers of benefits which might result from the study.

Criteria for Successful Completion of Vocational Technical Programs: defined as 1) completing an associate degree or certificate, 2) acquiring sufficient job skills to be successfully employed, or 3) other criteria identified by the Steering Committee associated with this study.

Delphic Exercise: eliciting and refining group judgments by drawing upon opinions of experts. Defined by Turoff (1970) as "a method for the systematic solicitation and collation of informed judgments on a particular topic" (p. 149). In contrast to a consensus Delphi exercise, which removes respondent's opinions from possible polar positions to greater agreement (Thiemann and Borkosky, 1973) a policy focus Delphi elicits contributions of advocates to establish "all the differing positions advocated and the principal pro and con arguments for the positions" (Turoff, 1970, p. 153).

Disabled student: According to Phillips et al. (1977) in their publication, Barriers and Bridges, a disabled individual is a person who has "a physical, mental or emotional impairment which interferes with some life function. A disability may or may not result in a handicap" (p.4). The disability results in a handicap when the student, interacting with the environment, meets barriers which prohibit the student from attaining goals.

Expert: anyone with unique knowledge who can contribute constructive and relevant input, an experienced specialist (Erlund, 1975).

Handicapped student: For this research two recent Public Laws, P.L. 94-142 and P.L. 93-112, Section 504 will provide definitions of "handicapped". P.L. 94-142 (Federal Register, Vol. 42, No. 163, Part II, August 23) defines handicapped children:

> 121a.5 Handicapped children.
> (a) As used in this part, the term "handicapped children" means those children evaluated in accordance with 121a.530.121a.534 as being mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multi-handicapped, or as having specific learning disabilities, who because of those impairments need special education and related services.

P.L. 93-112, Section 504 of the Rehabilitation Act of 1973, (Federal Register, Vol. 42, No. 86, May 4, 1977) defines "handicapped" more appropriately for post-secondary education:

> Appendix Analysis of Final Regulation: Subpart A--General Provisions. Definitions: 3. "handicapped persons". Section 84.3 (j) . . . The definition of handicapped person in paragraph (j)(1) conforms to the statutory definition of handicapped person that is applicable to Section 504, as set forth in Section 111 (a) of the Rehabilitation Act Amendments of 1974, P.L. 93-516.
>
> The first of the three parts of the statutory and regulatory definition includes any person who has a physical or mental impairment that substantially limits one or more major life activities. Paragraph (j)(2)(i) further

> defines physical or mental impairments because of the difficulty of ensuring the comprehensiveness of any such list. The term includes, however, such diseases and conditions as orthopedic, visual, muscular dystrophy, multiple sclerosis, cancer, heart disease, diabetes, mental retardation, emotional illness, and drug addiction and alcoholism

Since both definitions are legally applicable for this study, both were used to define the handicapped students at the post-secondary level.

Likert Rating Scale Survey: Statements to which the examinee indicates the intent of his agreement or disagreement (Noll and Scannel, 1972). Ratings of four and five were used for this study.

Participants: a group of thirty-five to fifty persons who had knowledge of or expertise in assisting handicapped students in gaining vocational skills.

Steering Committee: a committee of approximately fifteen persons responsible for advising the research project -- also known as a user body, as identified by Tuorff (1970), this type of committee usually expects some result from the exercise useful to their purpose. They both selected participants and participated; that is, they reacted to the major questions, completed the priority assessment and submitted recommendations for removal of barriers.

Scope of the Study

The study was designed to obtain a cumulative effect, that is, each phase of the study built on previous activities, from the review of literature through successive rounds of the Delphi exercise. The following outcomes were sought:

1. An inventory of existing research projects which were

conducted to provide information on the needs of handicapped students in post-secondary and community college vocational programs.

2. Itemized barriers solicited from experts in the field obtained through Round One of the Delphic exercise.
3. Recommendations for removing the barriers obtained from Round Two of the Delphic exercise.
4. Determination of the severity of the barriers.
5. Determination of the feasibility for removing the barriers.
6. A comparative analysis between consumers and experts to determine the feasibility of removing the barriers.
7. Recommendations and conclusions for applying the findings for policy formation and implementation.

A discussion of the conceptual foundations which support the study and a review of literature and project reports related to the study are presented in Chapter II. Detailed explanations of the procedures, instruments and design of the data collection will be presented in Chapter III. In Chapter IV the results of the statistical data analyses have been interpreted to describe identified barriers, recommendations for removing the barriers, and a comparison between ratings of experts and consumers regarding the feasibility of removing the barriers. From these analyses conclusions pointing toward policy formulation are presented in Chapter V.

CHAPTER II

REVIEW OF LITERATURE

This chapter will provide an overview of the problems in planning vocational technical programs for the handicapped student in community colleges. In addition this chapter will review some general trends in needs assessment, discuss legislation which has triggered the necessity of designing and adapting vocational technical programs for disabled students in community colleges, and review related research and project reports.

The theoretical assumptions which support this study are:

1. That barrier identification is a basic part of a needs assessment.
2. That barriers which prohibit the successful entry or completion of vocational technical programs are handicaps for disabled students

Programs of Planning Vocational Technical Programs for Community College Students Who Are Handicapped

State agencies and educational institutions which serve the handicapped agree that potential consumers of vocational technical education may include a sizeable segment of the population in Texas; however, no one knows how many community college students in Texas are disabled or handicapped. According to Whitcraft and Hamm (1975) 275 rehabilitation clients were enrolled in 1975 at the Houston Community College, one of sixty-seven community colleges in Texas offering vocational technical programs. Many more TRC clients were enrolled in vocational programs at other community colleges, however the information regarding numbers was unavailable since TRC had not collected the information. It appears, then, that a report of 398 students enrolled in post-secondary programs in Texas in Vocational and Technical Education Selected Statistical Tables, Fiscal Year 1975, (U. S. Department of Health, Education, and Welfare, 1976) is inaccurate when compared with the information from the TRC report, and the knowledge of the many other handicapped students in vocational technical programs in the community colleges in Texas.

Vocational technical programs have been successfully designed and implemented for a wide range of students, some examples being the mentally retarded student (Bilovsky and Matson, 1974), the geriatric student (Reid, 1978), the severely disabled student (Hessler, 1976), and the learning disabled student (Wiig, 1972). Describing the handicapped population is difficult, since it is almost impossible to indicate which members of the population are handicapped and which are disabled, even though most of the population classified as disabled are at times also handicapped by physical and attitudinal barriers. General characteristics of the handicapped population include inadeqaute income, inadequate education, lack of employment opportunities, and more advanced age than the general population (Berkowitz, Rubin, and Worral, 1977). Older Americans are becoming an increasingly large part of our handicapped population--two-thirds of the handicapped population between 16 and 64 are older than age 45 (Davis and Onyemelukwe, 1977).

Planning vocational technical programs for potential handicapped consumers whose numbers might range from 10% to 25% of the state's population, is a growing problem. Dr. Howard A. Rusk (cited in Phillips, et al., 1977), Director of the Institute of Rehabilitation Medicine, New York University Hospital stated: "By 1980, for every able bodied person in this country, there will be one person with a physical disability, one person with a chronic illness, or one person over 65 years of age" (p. 5).

Trends in Needs Assessment

Identifying elements of the problem of providing vocational technical education in community colleges for handicapped citizens in Texas is a complex study because of incomplete records of agencies involved, and an increasing geriatric population. Barrier identification, which is essentially problem identification, has been the approach taken to identify solutions in California (Phillips, et al., 1977) and Wisconsin (Kumar, 1977). Other approaches begin with the community college, and surveys of the existing enrollment (Spencer, 1977), or programs and services offered at the community college (Fabac, 1978) (New York State University, 1977). Another approach is the case study method (Stake, 1978).

In a resource study of the community colleges in California Sylvia Spencer (1977) used the students who were enrolled in community colleges in the year 1974-75 to obtain information regarding enrollment, ages and sex of students, numbers of dependents, age of onset of disability, financial status of the student, the initial goals, and factors responsible for termination or interruption of studies and course load reductions. In addition, student comments were recorded regarding the barriers encountered in transportation and architecture, social activities and services offered, and financial assistance. Solutions were not solicited.

Two research project reports available from the New York State Education Department (New York, State University of, 1976) (New York, State University of, 1977) provided extensive information regarding existing opportunities for qualified disabled students on the forty-eight two-year college campuses in this state. These reports could be classified as needs assessments in that research was directed toward identifying programs, services and facilities available to handicapped students. While the reports might appear to be only for information, their actual purpose was to expand programs, as stated in the 1977 report:

> Only through the prior awareness of specific levels of academic/vocational expectation can one determine the areas of negotiability, the compensatory mechanisms, the adaptive behaviors, the possible compartmentalization of limited but vital capabilities into acceptable areas of subspecialization--in short, the methods of circumventing and overcoming the difficulties posed. Rather than sanctioning the automatic dismissal of unexplored vocational options as insuperably taxing, the demystification should provide the stuff of specific challenge to ingenuity and inventiveness on the part of disabled individuals and the agencies and institutions legislatively charged with broadening their educational and occupational horizons. (New York, State University of, 1977, p. 2)

Expanded discussions of the reports are found later in this chapter.

A project concerned with programs and services available to handicapped students enrolled in Illinois community colleges had obtained answers to questions relating to student needs:

- the number of handicapped students who are being served in community college vocational programs

- the programs and services now available to these students
- what programs and services are successful
- what future activities are being considered. (Fabac, 1978, p. 1)

The project is still in progress, but an early indication of needs which were identified included architectural barriers, public transportation, coordination and communication within institutions and with outside agencies, guidance services, and career planning and job placement.

One practical method of research which can be used to identify the needs of the handicapped student is the case study method. The German philosopher, Wilhelm Dilthey (1910) (cited in Stake, 1978), claimed human studies (case studies) were the best methods for acquainting man with himself.

> Only from his actions, his fixed utterances, his effects upon others, can man learn about himself; thus he learns to know himself only by the round-about way of understanding. What we once were, how we developed and became what we are, we learn from the way in which we acted, the plans which we once adopted, the way in which we made ourselves felt in our vocation, from old dead letters, from judgments on which were spoken long ago . . . we understand ourselves and others only when we transfer our own living experience into every kind of expression of our own and other people's lives. (p. 5)

Unique features of the case study are the many complex isolated variables which do not allow the researcher to narrow the problem or theory. The variables do, however, provide experience and understanding. The findings of a particular case study can be a basis for a "naturalistic generalization" of other similar cases (Stake, 1978, pp. 6-7). None of the reports received from state educational agencies, however, had employed this method of needs assessment.

The barrrier identification approach to needs assessment and problem solving is an effort to identify the handicap, whether it is in the broad areas of society, the helping system, the disabled persons, their families, or their advocates (Phillips, et al., 1977). Identifying barriers can change the focus on the problem of handicaps. Previously barriers were thought to result from the "sick" person's handicap, so rehabilitation, treatment or healing was directed toward the individual. But, in this approach, barriers result from both the disabled individual and the physical and social environment. From this perspective the Chicago Planning Council in 1976 (cited in Shworles, 1977) defined "handicap" in the following way: "A handicapped person is one who has a physical, mental or emotional impairment or disability which together with the existing physical enviornment and prevailing social conditions substantially limits that person's major life activities" (p. 12). Rehabilitation, treatment, and healing should therefore be directed toward the environment as well as the disabled person. This approach is well stated by Thomas Shworles (1977): "One implication of this new definition to program processes at the post-secondary educational level is obvious: if a major source of handicapness [handicaps] is the environment, then it is the environment as much as it is the person which needs healing" (p. 12).

Identifying barriers can be a basis for assessing the needs of handicapped students and for designing and implementing vocational technical programs for them in communtiy colleges in Texas. Recommendations for removing barriers can become solutions to the problems which face disabled students in their educational pursuits.

Related Legislation

Public Law 94-142 (P.L. 94-142, 1975) mandates a free, appropriate education for all handicapped children and youth (ages 3 to 18 years not later than September 1, 1978, and ages 3 to 21 not later than September 1, 1980) in the least restrictive environment. This law applies to a community college if the college serves as an area vocational program for a high school, or if the Vocational Adjustment Coordinator or the Texas Rehabilitation Commission counselor has placed a disabled secondary student in a vocational technical program (Grusy, 1978). Community colleges in Texas are usually supported by a local tax base, federal funds and funds received from tuition. Because community colleges may not be considered "public" institutions if they charge tuition, there is some controversy regarding the application of P.L. 94-142 to postsecondary disabled students who are under the age of 21. The critical issue here is the individualized education plan (I.E.P.) required for handicapped students by P.L. 94-142. The educational background of the vocational instructor has not included preparation for teaching the handicapped or for planning for their instruction. However, it was observed at the time of a site visit to Suburban Hennepin County Area Vocational-Technical Centers (1978) that the I.E.P. was used quite successfully by the Special Services staff as inservice training for vocational instructors and other staff members.

Similar legislation, Public Law 94-482 (P.L. 94-482, 1976) Title II of the Education Amendments of 1976, emphasizes involving the special student in the regular education process, a process known as "mainstreaming", and indicates that vocational training should be made accessible to handicapped persons of all ages in all communities. The intent of the act is to provide high quality training which is realistic for gainful employment and suited to the person's needs, interests and ability.

The major federal commitment to the handicapped at the post-secondary level is found in Public Law 93-112 (P.L. 93-112, 1973). The Rehabilitation Act of 1973, Section 504. The Act applies to programs and activities receiving federal funds, and because all vocational technical programs in the community colleges referenced in Figure 1 receive federal funds, all are subject to this legislation. The section in its entirety is as follows:

> Section 504. No otherwise qualified handicapped individual in the United States as defined in section 7(6), shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

Although the law is brief and to the point, interpretation is both difficult and unique because it deals with individuals who are unique. Since disabilities vary broadly, each requires a different interpretation. Section 504 is viewed as a civil rights bill for the handicapped.

> The Rehabilitation Act (Section 504) represents a major commitment to the handicapped in the form of a civil rights law. The law is designed to help protect the rights of handicapped persons and to end discrimination on the basis of a handicap. The Act applies to all programs and activities receiving federal funds, not just to the individual programs financed with federal money. In addition, all federal funds are jeopardized by non-compliance, not just those being received for the handicapped. The regulations extend to employment practices, program accessibility, pre-school, elementary and secondary education, post-secondary education, and health, welfare and social services. (Illinois Department of Adult, Vocational and Technical Education, 1977, p. 4)

The legal implications are that if the law is interpreted as a Civil Rights Act, it will allow an individual to go into court on a private cause of action. Otherwise, the only other recourse the person would have would be to go through the administrative process, obtaining judicial review only after the administrative processes were exhausted (O'Donnell, 1977).

Some provisions of the regulations of Section 504 of the Rehabilitation Act of 1973 (Federal Register, Vol. 42, No. 86, May 4, 1977) apply to post-secondary institutions who receive or benefit from federal financial assistance. Regulations which became effective June 3, 1977 required that colleges and universities make their programs accessible (except for structural modifications) to the handicapped by August 2, 1977, make known their commitments to nondiscrimination of the handicapped by September 1, 1977, complete facility planning for program accessibility by December 3, 1977, and complete a self-evaluation of a program of non-discrimination by June 3, 1978. Additional requirements were record keeping of the institution's self evaluation, and assuring the Office of Civil Rights of the institution's compliance with requirements (due date to be established). Structural modifications and removal of architectural barriers were to be completed by June 3, 1980 (Biehl, 1978).

Review of Related Research and Project Reports

A letter of inquiry (Appendix A) was mailed to the Superintendent of Schools in each state and territory of the United States, requesting research studies which would enable the handicapped student to succeed in community college vocational education programs. Information received from twenty-seven states and Guam is summarized in Table I. Eleven research reports were received as a result of the request. Two reports from Kentucky and Florida focused on secondary rather than post-secondary vocational education, although the results from the studies could be used in planning post-secondary vocational programs for handicapped students. A research report from Arizona on programs providing work experience for handicapped and disadvantaged will be available September 30, 1978. Nineteen states reported that no research had been conducted in post-secondary vocational education for the handicapped. Eleven project reports were received of which six concerned service to the handicapped. Some reports were as recent as 1977 or 1978, which indicated that research and projects were responding to legislative demands for educational programs for handicapped students.

State education agencies submitted reports on needs assessment, planning, evaluation, services, employment placement, materials development for staff, reports related to specific disabilities, barrier identification, and guidelines for programs for the handicapped.

Needs Assessment Reports

A needs assessment survey (Bayne, Turner and Jackson, 1977) of the fourteen vocational regions in Kentucky consisted of interviews with junior and senior high students from 20% of the schools in each region to determine the number of people in Kentucky, secondary level and above, who met the criteria for disadvantaged and handicapped. This also identified vocational education programs currently available that addressed handicapped and disadvantaged students and identified the portion of the

TABLE I

RESPONSES TO INQUIRIES TO STATES AND TERRITORIES REGARDING RESEARCH STUDIES CONDUCTED IN VOCATIONAL EDUCATION FOR THE HANDICAPPED IN COMMUNITY COLLEGES

State	Respondent	Information Submitted
Alabama	William H. Osborn, Director Division of Postsecondary and Continuing Education Department of Education Montgomery, Alabama	No research. No related activities or projects except at the secondary level.
Arizona	Justin Marino Education Program Specialist Vocational Education/Special Education Liason Arizona Dept. of Education Phoenix, Arizona	Research report available September 30, 1978. A study of a program instituted through CETA-YEDPA, Vocational Education, and Community Colleges to provide programs for work experience for handicapped and disadvantaged youth, both in-school and out-of-school.
Arkansas	Raymond F. Faucette, Supervisor, Special Needs Program State of Arkansas Department of Education Division of Vocational Technical and Adult Education Little Rock, Arkansas	No research.
California	Patricia K. Morris Administrative Assistant Community College Occupational Programs Evaluation System 12345 El Monte Road Los Altos Hills, California	Research report. COPES Service Center. Guide: Community College Occupational Programs Evaluation System, 1976-1977. A program designed to assist any California community college in objective self appraisal of its occupational education programs. Can be used as a planning or appraisal instrument and included programs and services for handicapped students.

Table I - Continued

State	Respondents	Information Submitted
California	Barbara Reid, Dean Special Education DeAnza College Special Education Programs Cupertino, California	Project report. Reid, Barbara A., "DeAnza College, Special Education Programs", March 1978. Program provided learning experiences to handicapped students, ages 16 to 100 years, based on individual and specialized needs. Assisted each student in the attainment of high learning potential. Included an adaptive geriatric education program.
	Jim Browning, Specialist Programs for Exceptional Adults Los Angeles City Unified School District Los Angeles, California	Project report. Browning, Jim. "Division of career and continuing education in peace capabilities for serving the adult handicapped", January 1978. A report of programs at Regional Occupational Centers which serve 957 students with special needs. Included community adult schools which also served shut-ins, government and industry programs, pilot project for the deaf, adult basic education centers, skill centers and activity centers, and advisement services.
	Louk van der Stap Resource Center for the Handicapped 4033 Ruffin Road San Diego, California	Project report. Resource Center for the Handicapped. "San Diego community college district: comprehensive plan programs and services for disabled", May 1, 1977. Comprehensive Services Plan for 1977-78. Report of supportive services and resource center for the handicapped. Services provided to Miramar Community College, Evening College, Adult College, Educational Cultural Complex, City Community College and Mesa Community College.
	Lynn Witt Administrative Assistant Disabled Students Placement Program University of California, Berkeley Berkeley, California	Project report. Roberts, Janet and Bruce Brown, "Second Interim Report, Physically Disabled Students Placement Project, An Innovative Services Demonstration Project for Severely Disabled Persons", October 1976. Findings: greatest barriers to successful employment of handicapped persons with disabilities are attitudinal, on the part of society and employers.

Table I - Continued

State	Respondents	Information Submitted
California	Lynn Witt Administrative Assistant Disabled Students Placement Program University of California, Berkeley Berkeley, California	Project report. Regional Affirmative Action Clearing House. A Guide: Affirmative Action Programming for Employment of Persons with Disabilities , September 1976.
	William Morris Evaluation Specialist Chancellor's Office California Community Colleges Sacramento, California	Project report. Gold, Ben K., Director of Research, Student Accountability Model (SAM): Operations Manual , February 1977. A system of procedures developed for the purpose of improving "follow-up" information about community college occupational students after they leave college. Did not include specific information on handicapped individuals, but could be incorporated into the model. Project report. Smith, Ronald E., Editor, Operational Guideline: Programs for the Handicapped , Fall 1977. Written for local college district personnel to assist them in complying with regulations relative to the education of the handicapped, to provide a uniform approach to the administration of programs and services for students with handicaps at the California Community Colleges, to provide assistance to administrators and to provide reference guide for daily use. Project report. Spencer, Sylvia S., Disabled Students Enrolled in California Community Colleges, 1974-75: Resource Study , June 1977. A study of the handicapped student on the community college campus.

Table I - Continued

State	Respondent	Information Submitted
Delaware	Adam W. Fisher State Supervisor of Vocational Education for Exceptional Children Dept. of Public Instruction Dover, Delaware	No basic or applied research studies. Inservice for teachers of non-handicapped and handicapped students regarding the removal of human and architectural barriers, teaching methods, programs, materials and needs of handicapped students.
Florida	Ralph Turlington, Commissioner State of Florida Department of Education Talahassee, Florida	Information only. A community college directory from the State of Florida, and general information regarding programs in Miami-Date Community College, Daytona Beach Community College, and St. Petersburg Junior College.
	Ralph Slaughter Division of Community Colleges Department of Education State of Florida Tallahassee, Florida	Research report. Schwartz, Stuart E., Final Report: Research and Development of Instructional Booklets for Vocational Education for Mainstreaming the Handicapped, Another Step Forward, March 1978. Information for secondary vocational teachers about the diverse characteristics and special needs they encountered with handicapped learners in their classes.
	Frederick Atherton Educational Consultant Florida Dept. of Education Division of Community Colleges Tallahassee, Florida	Research report. Florida State Advisory Council on vocational and Technical Education. Accessibility of Buildings and Facilities to the Physically Disabled, October 1977.
Illinois	Rita Kalfas Educational Specialist Handicapped and Disadvantaged Illinois Office of Education Department of Adult, Vocational and Technical Education Chicago, Illinois	Research report. Illinois Department of Adult, Vocational, and Technical Education. The Illinois Network of Exemplary Occupational Education Programs for Handicapped and Disadvantaged Students, 1977. Project report. Tetzlaff, Mary, S.O.S., Success Oriented Service. A project funded to serve disadvantaged and handicapped students in vocational and technical education at Triton. Project consisted of three phases: planning, implementation and dissemination, 1976.

Table I - Continued

State	Respondents	Information Submitted
Illinois	Rita Kalfas, Educational Specialist Handicapped and Disadvantaged Illinois Office of Education Department of Adult, Vocational and Technical Education Chicago, Illinois	Research report. Fabac, John N., "An Interim Report on the Programs and Services Available to Handicapped Students Enrolled in Illinois Community Colleges", February 24, 1978.
Iowa	Dorothy I. Brown, Consultant Support Services Section State of Iowa Dept. of Public Instruction Des Moines, Iowa	No research.
Kansas	Merle R. Bolton Commissioner of Education Kansas State Department of Education Topeka, Kansas	No research.
Kentucky	Bureau of Vocational Education Kentucky Dept. of Education Frankfort, Kentucky	Research report. Bayne, G. Keith, Kenne G. Turner and Rebecca D. Jackson, Final Report: An Assessment of Vocational Education Needs of the Disadvantaged and Handicapped in Kentucky. Secondary vocational education, 1977.
Louisiana	Florent Hardy, Jr., Supervisor, Research Coordinating Unit Louisiana Dept. of Education Baton Rouge, Louisiana	No research.

Table I - Continued

State	Respondent	Information Submitted
Maryland	Judy Harkins, Coordinator Statewide Plean for the Delivery of Occupational Programs and Services to Handicapped Students Maryland State Board for Community Colleges Annapolis, Maryland	Project Report. Harkins, Judy, Coordinator, "Statewide Plan for Occupational Programs and Services for Handicapped Students in Maryland Community Colleges", May 23, 1978. A statewide plan to assist community colleges with compliance with Section 504 (not to monitor compliance), and to assist community colleges in becoming more responsive to the needs of handicapped students.
	Daniel B. Dunham Assistant State Superintendent Vocational/Technical Education Maryland State Department of Education Annapolis, Maryland	Research report. Kitt, Wendy, Lois Schuster and Nancy Rapp, "Epilepsy, A Second Look", June 1977. A study which was directed toward the needs of people with epilepsy in the Community College of Baltimore.
		Research report. Harkins, Judy, Project Coordinator, Final Report of the Statewide Feasibility Study of Post-Secondary Education for Deaf People in Maryland, March 15, 1978.
Massachusetts	Anthony V. Cipriano, Director Bureau of Post-Secondary Education Occupational/Technical Education Commonwealth of Massachusetts Department of Education Boston, Massachusetts	No research. Emphasis was placed on mainstreaming the handicapped, and providing increased service to the handicapped, disadvantaged, and bilingual population.
Michigan	Laurence A. Barber, Specialist Disadvantaged and Handicapped Programs Michigan Dept. of Education Lansing, Michigan 48909	Project report. Michigan Department of Education, Vocational Technical education service. Inter-agency model for vocational education for handicapped persons, Post Secondary Model, 1977. Community college programs were funded as pilot models in three community colleges to essentially serve the severely disabled.

Table I - Continued

State	Respondent	Information Submitted
Missouri	Miles F. Beachboard, Director Programs for the Disadvantaged and Handicapped State of Missouri, Department of Elementary and Secondary Education Jefferson City, Missouri	No current research. Two funded projects, one which served the handicapped assisting in mainstreaming students, and another which served the deaf and more severely handicapped in community colleges.
New Hampshire	Charles H. Green, Chief Division of Post-Secondary Education Department of Education State of New Hampshire Concord, New Hampshire	No research.
New York	Mike Van Ryn, Chief Grants Administration Unit State Education Department Albany, New York	Research report. New York, State University of. A Guidance Manual for the Physically Disabled Two Year College Applicant, 1976. A survey of community colleges in New York regarding architectural accessibility, counseling and support services and vocational degrees offered in community colleges. Research report. New York, State University of. Vocational Education: A manual of program accessibility for the applicant, 1977. Project report. Schneps, Jack A., and Frances Slater, Responding to the Needs of the Handicapped: Two Year College Strategies Workshop/Conference, September 1974. A workshop to explore the methodologies employed to sensitize personnel and develop strategies to serve the disabled student.

Table I - Continued

State	Respondent	Information Submitted
North Dakota	W. C. Boekes, Special Needs Supervisor State Board for Vocational Education Bismarck, North Dakota	No research.
Oklahoma	Clyde C. Matthews State Supervisor, Special Programs Oklahoma State Dept. of Vocational and Technical Education Stillwater, Oklahoma	No research.
Oregon	Carrol M. deBroekert, Director Community College Instructional Services State of Oregon Department of Education Salem, Oregon	No research.
Rhode Island	Thomas C. Schmidt Commissioner of Education Rhode Island State Department of Education Providence, Rhode Island	No research.
Tennessee	Dee Wilder, Director Research Coordinating Unit Tennessee State Dept. of Education Nashville, Tennessee	No research.
Vermont	Nancy Wylie, Acting President Community College of Vermont Montpelier, Vermont	No research.

Table I - Continued

State	Respondent	Information Submitted
Virginia	Ed Morse, Coordinator Student Services Virginia Community College System Richmond, Virginia	No research.
West Virginia	John C. Wright, Vice Chancellor West Virginia Board of Regents Charleston, West Virginia	No research.
Wisconsin	Lloyd W. Tindall Project Director Wisconsin Vocational Studies Center University of Wisconsin Madison, Wisconsin	Research report. Kumar, Vasant, Handicapped Persons in Wisconsin's Vocational, Technical and Adult Education Districts - Assessment of Educational Techniques and Identification of Barriers, July 1977.
Wyoming	Abel S. Benavides, Consultant Occupational Special Needs Programs Wyoming Dept. of Education Cheyenne, Wyoming	No research. Individual community colleges conducted self evaluations of facilities, course offerings and other related information to be in compliance with federal and state mandates.
Guam	Victoria Harper, Assoc. Supt. Special Education Division Department of Education Agana, Guam	No research.

target populations that could benefit from vocational education. In addition to data obtained from students, information on programs and services available in Kentucky was obtained from Vocational Regional Directors, the Bureau of Vocational Rehabilitation Services and the Special Vocational Education Unit in the Bureau of Vocational Education. Data indicated that 15.4% of the students surveyed met the criteria for the handicapped as defined by the 1970 Federal Register.

Of approximately 37,160 handicapped students in Kentucky secondary schools, 35.3% were enrolled in vocational programming Another estimated 14,580 secondary handicapped students were not in school, and 1,113 handicapped students were in post-secondary and adult programs, as of fiscal year 1975.

The following conclusions in the Kentucky report are pertinent to the current study of barriers:

1. The instrument designed for data gathering would be ineffective for an adult needs assessment.
2. The data indicated a discrepancy between available programs and students' aspirations, since 14,419 handicapped students felt that vocational training was unavailable to them.
3. Support service were designed to meet the needs of programs rather than the handicapped students in those programs.
4. Many handicapped students are in programs which appeared to have little appeal to students.
5. Many students appeared to have occupational and educational aspirations which were inconsistent with manpower needs in their geographical area.

Sylvia Spencer (June, 1977) gathered raw census data to develop a cursory description of the physically disabled population in the California Community Colleges. The main objectives of the study were to inform legislators about the status of disabled students' financial needs and to inform anyone concerned with services to the disabled student, such as the enabler counselors.

According to Spencer, the percentage of disabled Californians who become disabled after the age of 18 is 79%, with the greatest number of respondents (31.1%) in the 21-26 age group and the second greatest (28.5%) in the 36-55 age group. The "stop-out" rate of 17.8% of disabled students compared favorably with the "stop-out" rate of all students on community college campuses, with the major causes for interruption of studies being medical care and financial problems with a strong correlation between the two. Although five major sources of financial assistance were identified--Supplemental Security Income, Social Security Disability Insurance, Veterans' Administration Services, Department of Rehabilitation and Workmen's Compensation--these services were identified as inadequate to meet the student's daily medical and financial needs, and many students lived below the poverty level.

One section of the study reported students responses on social problems found in their daily lives on and off campuses. Such responses were quite similar to barrier identification undertaken by the current study. Some of the comments included:

> The teachers should take a short course on handicapped student problems and be aware of the help they as teachers can give to make our efforts of learning easier.

> Instructors are reluctant to give individual attention to handicapped individuals.
>
> Creative counseling, logical explanations and support for emotional problems.
>
> More social activities on campus. We need to make more friends.
>
> More and better job counseling. Counselors who know their limits and can advise us as to the jobs we can train and study for that won't be phased out by the time we graduate. More help in finding jobs. More cooperation between the services, community and college, to meet the needs of the handicapped student.
>
> A directory of services available, also a listing of resources we can call upon. More publicity regarding financial programs and how to apply for them.
>
> We need a place on the campus where we could go and rest between classes or when tired. A place for nandicapped students only where we could take off our braces or get out of the wheelchairs and lay down for awhile.
>
> We need a place, a quiet place to study. Perhaps a room with special equipment for our use, i.e., opticon, braille typewriters, tape recorders and perhaps a reader or person available to assist us when needed. (Spencer, 1977, pp. 38-41)

Early results from a survey of programs and services available to handicapped students at Illinois community colleges (Fabac, 1978) indicated that about 1.6% of the students in vocational programs applied for reimbursement of funds, although officials indicated that a far greater number of handicapped persons were receiving services than this percentage indicated. Twenty-nine of the fifty-one community colleges in the state responded to surveys mailed to Deans of students services. Areas of inquiry included planning for coordinated specialized programs and services, policies and procedures related to the delivery of specialized services for handicapped students, definitions of "handicapped" as used by community colleges, services for meeting the needs of handicapped students, staff development strategies, organization to improve services and programs to handicapped students, and a summary of needs that must be met in order to adequately serve handicapped students. Some of these needs included the removal of architectural barriers, improved transportation, coordination and communication within institutions and with outside agencies, provision of guidance services, career planning and job placement. Other needs were special courses for mentally retarded students, and staff development.

Fabac stated that the report was an incomplete and sketchy interim report of a continuing investigation. Essentially the investigation was designed as a needs assessment study to:

1. Obtain information regarding the number of handicapped students who were being served in community college vocational programs.
2. Determine the programs and services now available to those students.
3. Identify the programs and services which were meeting with success.
4. Determine what future activities should be considered.

Planning Reports

Two reports of meetings designed to devise strategies for meeting the needs of the handicapped community college occupational students were received. The report from New York, *Responding to the Need of the Handicapped: Two-Year College Strategies Workshop* (Schneps and Slater. 1974) included information from academic deans, student personnel workers, potential employers, and handicapped students. These representatives met to discuss the needs of handicapped students at the postsecondary level.

The objectives were to improve:

1. the delivery of decision-making information to the handicapped occupational student,
2. the value of program and career planning,
3. the community college response to needs of the handicapped occupational students,
4. the employment potential relative to the handicapped student's skill training. (p. 2)

Participants in the workshop discussed the incoming student, on-campus support, and the graudating student, and gained an increased awareness of the complex issues facing those who respond to the needs of the handicapped. Participants also made commitments to prepare disabled students for employment and encourage employers to hire the disabled.

A statewide meeting in Maryland held on May 23, 1978 (Harkins, 1978) focused on assisting the community colleges to serve handicapped students in compliance with Section 504 of the Rehabilitation Act of 1973. The meeting produced suggestions and comments from a committee of twenty-two persons representing state agencies and educational institutions, and a plan to offer maximum accessibility and services to handicapped students in the most efficient manner possible. The committee discussed interagency planning, funding, and the issue of centralization/regionalization of services versus decentralization. Input from the committee was used to draft a plan for compliance with Section 504. Individual surveys of the colleges were also used to collect information. The committee discussed self-evaluation reports which must be completed on planning for program accessibility and services to handicapped students by June 2, 1978.

Reports of Evaluation of Programs

Community College Occupational Programs Evaluation Systems (COPES service center, 1977) was established by the Community College Chancellor's Office in 1971 to improve the quality and availability of occupational education in community colleges in California. The program helped personnel objectively appraise their occupational education programs Identifying problems of the handicapped student through this system was similar to the barrier identification study conducted in the VTAE districts in Wisconsin (Kumar, 1977) Each participating college determined which of the following to employ:

> ·Appraisal of its total occupational education systems
>
> ·In-depth appraisal of one or more of four specialized subsystems:
>
> --consumer and homemaking education programs and services
>
> --cooperative work experience education programs and services for disadvantaged students
>
> --occupational education programs and services for disadvantaged students
>
> --occupational education programs and services for handicapped students
>
> ·Appraisal of other portions of the college's occupational education system, such as one or more cluster of programs, a single program, or a process. (COPES, 1977, p. 2)

The form for evaluating occupational programs for the handicapped included sections to be completed by the college president or his or her designee (typically the enabler for the handicapped or the occupational education administrator), the professional personnel, the students, the community. and a site visit team. Evaluations of occupational education programs for the handicapped in twenty-four community colleges reported in the 1975-76 summary of COPES activities indicated that the five items rated highest by the validation teams were:

> Qualifications of enablers/coordinators and directors in charge of administering occupational programs and services for the handicapped
>
> Enabler programs established to provide services to handicapped students
>
> Use of handicapped students' input in planning programs and services for the handicapped (rated equally with the next item)
>
> Special education qualifications of instructional staff working with the handicapped
>
> Provision for effective coordination and direction for programs, services, and occupational education efforts for the handicapped

The five items rated lowest were:

> Enrollment of handicapped students in vocational work experience programs
>
> Use of job success and failure information of handicapped student graduates in program improvement (rated equally in the next item)
>
> Job placement of handicapped students in relation to completions
>
> Systematic and periodic review and follow-up of handicapped occupational students

> Systematic collection and use of information on employment opportunities and community needs for occupational programs including any special conditions applicable to handicapped students. (Summary of 1975-76 COPES Activities, p.3)

Beneficial results of the self-study included improved counseling and guidance, increased professionalism, improved follow-up and improved services for handicapped students.

The *Student Accountability Model*, (SAM) (Gold, 1977) in California served over 90% of the community colleges in that state, providing follow-up information on students after they left college. Resulting information has been used for planning and evaluating programs. Demographic information including the student's handicapping condition if any, was obtained before the student left the program and was recorded in a master file. Items for the follow-up questionnaire were suggested by the twelve consortium members of California's community colleges. Items were rated on an importance scale of 0 to 100. Three essential questions were:

1. What is your present employment status?

   _______Working, full-time (30 hours per week or more)
   _______Working, part-time (less than 30 hours per week)
   _______Not working, looking for a job
   _______Not working, not looking for a job
   _______Military Service

2. Which single statement best describes your present job?

   _______In the occupation for which I prepared while in college
   _______In an occupation related to my college training
   _______In a field *not* related to my college training
   _______Apprenticeship program (specify) ______________________
   _______Not employed

3. Are you attending college?

______No
______Yes

College____________________
Major______________________
Units carried_____________

A total of 20 questions were rated as highly desirable, desirable, and optional questions. Consortium members suggested that the questions rated as highly desirable (three additional questions) be included in the questionnaire. The manual includes detailed steps for implementing the model, and collecting and evaluating data received.

Reports of Programs Providing Services

Five reports of services were provided by pilot projects, special programs, or comprehensive programs for handicapped community college students. Although the service project reports are not research reports, many of the projects have been implemented as a result of research.

Michigan Inter-agency Model. The "Michigan Inter-agency Model and Delivery System of Vocational Education Services for the Handicapped", a report of inter-agency cooperation was based on the following plan:

1. An inter-agency supervisory committee who jointly identify needs, establish priorities, explore alternatives, and minimize overlap and duplication of services to the handicapped within a traditional vocational education model as opposed to the characteristic OJT concept.

2. A continuous review and updating of specific goals and objectives of each agency's legal and philosophical commitments to ensure effective and productive delivery of services to the handicapped.

3. Continuous sharing of ideas, problems, and conflicts from the local level between field staff and administrative staff of the inter-agency cooperation

> committee to allow for new and innovative programming and smooth delivery of services to youth at the local level. (Michigan Department of Education, 1977, p. 1)

The post-secondary pilot model has been recently designed to serve severely disabled clients, and to enhance their prospects for long-term employment. The client flow from evaluation through any of the other program components is depicted in Figure 2. The occupational education program is divided into eight modules, each providing special and instructional services for the clients. Social support services are provided throughout the training programs

S.O.S. Project at Triton College. Tetzleff (1976) produced a handbook for a project at Triton College in River Grove, Illinois. The purpose of the project was to provide a service model for disadvantaged and handicapped students funded by the Division of Adult Vocational and Technical Education. Services include identification and referral by high school and college personnel to the S.O.S. staff, provision of services, resources, and materials for students and faculty, such as campus resources, professional development resources, and classroom and student materials available in a special section of the library. A handbook is made available for faculty and students as a part of the implementation phase of the project.

The S.O.S. project at Triton College is a part of the Illinois Network of Exemplary Occupational Education Programs for Handicapped and Disadvantaged Students (Illinois Department of Adult, Vocational, and Technical Education, 1977), which includes nine sites throughout the state of Illinois. Objectives and activities at the nine sites include:

TRAINING SERVICE GRANT PROGRAM COMPONENTS

Post Secondary Pilot Model

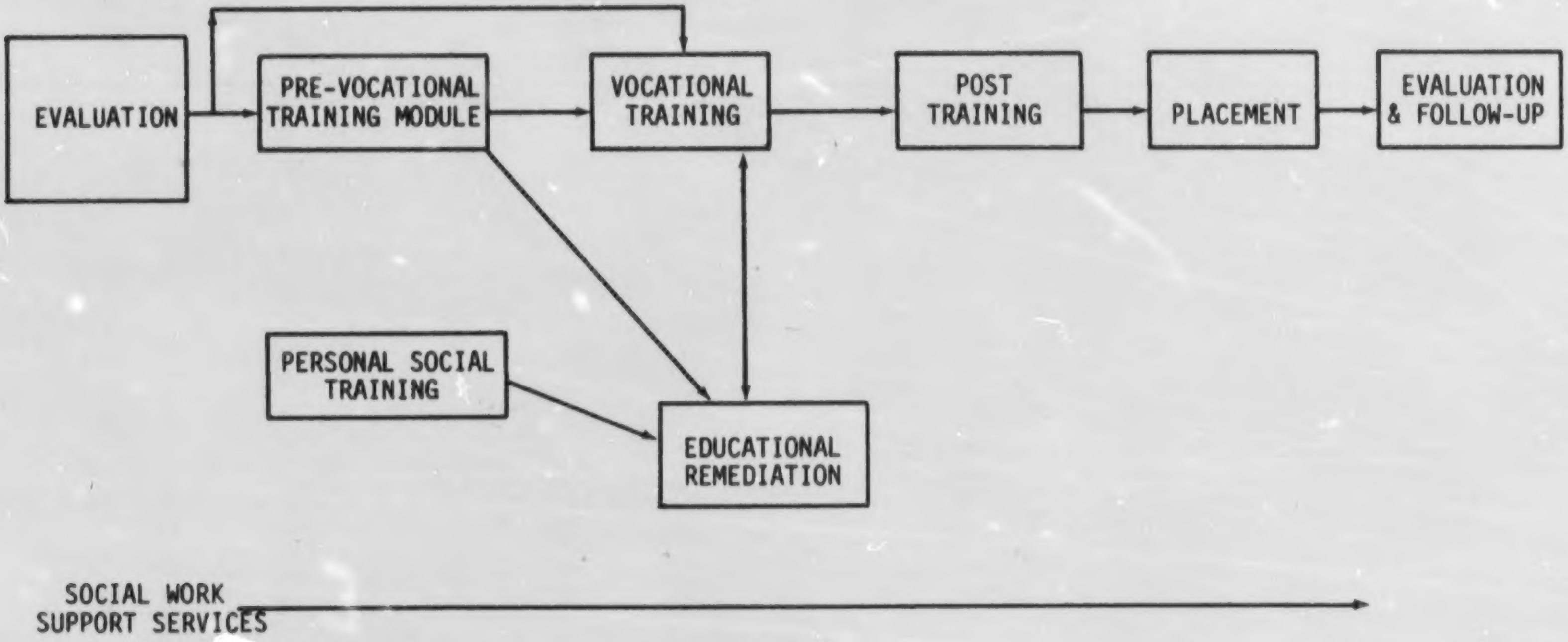

EVALUATION
PRE-VOCATIONAL TRAINING MODULE
VOCATIONAL TRAINING
POST TRAINING
PLACEMENT
EVALUATION & FOLLOW-UP
PERSONAL SOCIAL TRAINING
EDUCATIONAL REMEDIATION
SOCIAL WORK SUPPORT SERVICES

FIGURE 2. MICHIGAN INTER-AGENCY MODEL AND DELIVERY SYSTEM OF VOCATIONAL EDUCATION SERVICES FOR THE HANDICAPPED (Michigan Department of Education, p. 2)

1. Identification of handicapped and disadvantaged students
2. Prescriptive programming
3. Supportive services to students in the mainstream
4. Staff development
5. Curriculum development and revision
6. Program planning and accountability

The project was designed to assist community colleges and local educators to meet their particular needs.

Los Angeles Unified School District. Serving the Adult Handicapped. The Division of Career and Continuing Education In-Place Capabilities, a division of the Los Angeles City Unified School District (Browning, 1978), provided a variety of services and materials as described in brochures, memorandums, and letters. These services were provided in regional occupational centers, community adult schools, government and industry sponsored programs, adult basic education centers, skill centers, and activity centers. Services include a pilot project for the deaf which provides individual instructional materials for deaf students involved in vocational training, and an advice service located in Central City Occupational Center to test visually handicapped students for the GED certificate.

DeAnza College Special Education Programs. Reid (1978) reported on the "DeAnza College Special Education Programs" in DeAnza, California, which can be described as exemplary programs for people with all handicapping conditions and students who "range in age from sixteen to one hundred years". One program, the Adaptive Geriatric Education Program, gave the aged in the community an opportunity to participate in learning experiences which compensated for physical, emotional, and cognitive deficiencies due to age and institutionalization. Other programs included a corrective and rehabilitative Physical Education Program for the Physically Limited, the Hope-DeAnza North Sunnyvale Program, an individualized rehabilitation program leading to prevocational and vocational training, an Educational Diagnostic Clinic for persons with learning disabilities, and a Physically Limited Program which encourages the physically limited to attend classes at DeAnza. The over-all goal of the program as described by Reid was to provide learning experiences based on individual and special needs and to help each person attain his or her learning potential.

San Diego Community College District. The "San Diego Community College District: Comprehensive Plan Programs and Services for the Disabled" (Resource Center for the Handicapped, 1977), was a plan developed to comply with recent legislation. An extensive needs assessment directed to individual clients, agencies, and community college personnel was conducted. The needs assessment included a comprehensive planning conference, a coordination of plans with colleges in the San Diego Community College District, and reviews by the college presidents, district chancellor, and district advisory committee. Results of the needs assessment and planning sessions are contained in the report. The philosophy of the San Diego Community College District for disabled students was that "Disabled students are special in the sense that all students are individual and special, and they deserve and shall have the same educational opportunities available to all students" (p. 401.8). The report also indicated that disabled students who receive services to enable them, whenever possible, to be integrated into the mainstream of education.

Reports of Projects Related to Employment

A project report on an innovative services demonstration for severely disabled persons in California (Roberts and Brown, 1976) served a two fold purpose as a service innovation project and a research project. The second phase of the research project compared the job-seeking and placement patterns of the participants in the first phase with the participants in the second phase. A student follow-up indicated a high rate of placement, and to analyze these results, a task analysis of the activities performed by project staff was developed. The greatest barriers to successful employment were found to be the attitudes of employers were much more willing to hire the technically trained students than they were the students with backgrounds in social science or liberal arts.

A report prepared by The Regional Affirmative Action Clearinghouse (1976) summarized contractor obligations under Section 503 of the Rehabilitation Act of 1973 as a plan which could be used by the employer for increasing staff awareness. The report also includes an appendix which identifies agencies, organizations, publications, and standards which employers can use in recruiting, reaching, and accommodating persons with disabilities. Barriers which disabled employees encounter were discussed in one section of the report. Attitudinal barriers were discussed, such as the supposed higher insurance costs of hiring disabled persons, job performance, accident rates, safety factors, absenteeism, and turnover rates. Recommendations for removing these barriers were education and the integration of the affected population with the general public.

Reports on Materials for Staff Development

Research and development of instructional booklets for the purpose of mainstreaming the handicapped in vocational education in Florida resulted in the publication of five booklets entitled Research and Development-of Instructional Booklets for Vocational Education for Mainstreaming the Handicapped: Another Step Forward (Schwartz, 1978). The broad range of topics covered in this report is reflected in the titles of the booklets as follows:

1. Mainstreaming Handicapped Students into the Regular Classroom
2. Characteristics of Handicapped Students
3. A System of Management
4. Evaluation and Placement
5. Architectural Considerations for a Barrier Free Environment.

The procedures for coordinating and developing the booklets, along with a dissemination plan to distribute materials throughout the state of Florida are summarized in a report by Dr. Stuart E. Schwartz (the principal investigator), entitled, . . . Another Step Forward (1978). Although the target audience is the secondary vocational teacher, the booklets are applicable to post-secondary vocational education, and might be used for in-service programs.

Reports Related to Specific Disabilities

A grant was awarded to the State University of New York Coordinating Region No. 4 in July of 1975 to research opportunities for disabled students on forty-eight two year college campuses and to develop a pre-admission guidance and counseling service for these students (New York, State University of, 1976). The product of the study, A Guidance Manual for the Physically Disabled Two Year College Applicant, provides extensive information regarding physical accessibility, available support services, and vocational degrees offered.

A similar, but more extensive manual, Vocational Education: A Manual of Program Accessibility for the Physically Disabled Two-Year College Applicant, (New York, State University of, 1977) was developed, listing fifty vocational degree programs. Each program was described by a narrative giving the general characteristics of curricula offered under the career title, and the names of the community colleges in New York which offered the courses. Academic tasks along with the kind of classroom setting, the physical and personality demands of the course's occupational training, and the workplace are all described in detail. Information was obtained from a task analysis questionnaire mailed to every professor teaching a course required to complete a vocational technical degree program. The study benefited orthopedically handicapped, visually handicapned, and hearing impaired students by providing them with a guidance manual to all vocational technical programs in community colleges in New York.

The Florida State Advisory Council on Vocational and Technical

Education (1977) completed a study, Accessibility of Buildings and Facilities to the Physically Disabled, to determine the accessibility of the physically disabled individual to the vocational and technical buildings and facilities. The report was completed as a part of the Council's effort to meet the responsibility required by Title II of Public Law 94-482, also known as the Vocational Education Amendments of 1976, which requires that the state advisory council "evaluate vocational education programs, services, and activities assisted under this Act, and publish and distribute the results thereof" (Florida State Advisory Council, p. i).

The Final Report of the Statewide Feasibility Study of Post-Secondary Education for Deaf People in Maryland, (Harkins, May 23, 1978), indicated that deaf people are often under employed and have a median income $2,000 below that of the general population, and that post-secondary education could better prepare the deaf individual for employment. Gallaudet College is available to some deaf students, but difficult entrance requirements exclude 90% of deaf high school graduates. According to the study support services for deaf students need not include expensive interpreter services for each students, but a support service system is needed and should include interpreting, notetaking, counseling, tutoring, special class instruction, sign language classes for hearing students, additional faculty and staff and inservice training for faculty and staff on the implications of deafness and on working with deaf people.

The H.E.W. regulations for Section 504 specifically state that,

> Colleges and universities are required to make reasonable adjustments to permit handicapped persons to fulfill academic requirements, and to ensure that they are not effectively excluded from programs because of the absence of auxiliary aids. Groups of colleges may not establish consortia exclusively for handicapped students (1977)

Nevertheless, the report recommended that regional programs be provided for the deaf to assure quality access to the programs in an institution, especially occupational programs. The report also offered a proposed budget for a regional program for deaf students.

Epilepsy, A Second Look (Kitt, Schuster and Rapp, 1977) is a report of a project funded by the Maryland State Department of Education, Division of Vocational Technical Education, which provided a counseling program for people with epilepsy at the Community College of Baltimore. Goals of the program were to place people with epilepsy in jobs or in educational programs leading to a career, and to develop a model program of career education, counseling, and employer education demonstrating the effectiveness of a coordinated approach to assisting people with seizure disorders. The project also included informal training sessions for employers and bulk mailings to personnel directors. This resulted in an exchange of information and a more positive climate for employment.

Barrier Identification

One research project included barrier identification and the assessment of educational techniques (Kumar, 1977). In this study, site visits were made to sixteen Vocational Technical Adult Education Districts (VTAE) in Wisconsin to present a survey questionnaire to staff members and to obtain the commitment of each VTAE school district. The survey questionnaire solicited barrier identification within each of nine designated categories of barriers: "1) attitudinal, 2) accessibility, 3) pre-employment, 4) employment, 5) post-employment, 6) legal, 7) organizational, 8) professional preparation and 9) resource barriers" (p. 3).

In the category of attitudinal and emotional barriers, respondents indicated that handicapped students viewed themselves as failures, they were frustrated with their rate of progress in acquiring skills, had little or no knowledge of relevant vocational programs and indicated a lack of self-confidence. Although accessibility barriers were more controversial among the respondents, the one item they did agree on was that the cost of transportation was the most severe barrier in this category. The item most agreed on in the area of employment was that there was a lack of systematic follow-up during the initial period of employment. In the legal category, respondents strongly agreed that handicapped persons did not know of available programs and benefits. There was also agreement that the support services of employers might be inadequate, that employers might be unwilling to make financial commitments, and that labor and industry needed to hire qualified handicapped persons. Generally, barriers included lack of knowledge, negative attitudes on the part of non-handicapped persons, competing societal demands, inadequate leadership, architectural barriers, media barriers and barriers within employment.

Guideline for Programs for the Handicapped

Operational Guideline: Programs for the Handicapped, (Smith, 1977), prepared under the direction of the California Community College Chancellor's Office, were given to local college/district personnel to assist them in complying with regulations relative to the education of the handicapped, to provide a uniform approach to the administration of programs and services for students with handicaps at Community Colleges in the State of California to assist local administrators in developing a delivery system of supportive services, and to provide a reference guide for daily use. The guide is divided into eight sections, with detailed definitions and instructions on general administration, student participation, budgeting for programs and services, and implementing, reporting, and evaluating programs and services. This comprehensive guideline was to serve as a reference only, and was to be adapted for use whenever relevant to the needs of a particular community college.

Summary of Review of Literature and the Relation to the Study

An extensive ERIC search and review of Dissertation Abstracts yielded very few studies or journal articles regarding handicapped students in community colleges, probably because such studies responded to recent legislation for the handicapped. Reports received from research development or training projects conducted in other states, however, did prove to be a valuable resource. Reports from these projects provided references for the investigator in selecting major tasks.

Three studies reviewed dealt with needs assessments for the handicapped student population. A study conducted in Kentucky yielded information regarding the appropriateness of vocational programs for the handicapped, the availability of such programs, and the appropriateness of supportive services. Although the investigators found that the study could not be applied to the adult population, results did relate to barrier identification and thus provided information of barriers for the current study (Bayne, et al., 1977). Sylvia Spencer (1977) conducted a statewide survey in California on the status of financial problems of the handicapped community college student and the need for services for this student population. Spencer's study was used as a basis for selecting several tasks recommended by this investigator for implementation. John Fabac (1978) conducted a needs assessment survey in Illinois regarding numbers of students, programs and services, the success of programs and services, and the need for future planning. These were related to the barrier identification process of this study.

Statewide meetings for representatives of the handicapped student population, and for agencies, employers, and educators were conducted in the states of New York (Schneps and Slater, 1974) and Maryland (Harkins, 1978b) to discuss the needs of the handicapped student at the postsecondary level. The participants in this Delphi study had similar objectives--to provide skills training and career planning for handicapped students in community colleges and to serve handicapped students in compliance with Section 504 of the Rehabilitation Act of 1973.

Two projects in California, the COPES (1977) evaluation system and the Student Accountability Model (SAM) (Gold, 1977), were responsible for evaluating vocational technical programs attended by handicapped students in California's community colleges. The COPES system is somewhat similar to this study in that the Delphi study participants identified needs for planning and evaluation. Programs were rated by the team in the COPES system in the same manner that barriers and recommendations were rated in this study.

Five of the reviewed projects focused on providing services for handicapped community college students--an area where participants of this Delphi study identified many barriers. The Michigan interagency project (Michigan Department of Education, 1977) was a study of interagency planning for severely disabled students. The S.O.S. project in Illinois focused on identifying handicapped and disadvantaged students, prescription programming, supportive services, staff development, curriculum development and program planning, and accountability and were very much related to this project and the tasks which evolved from the study (Illinois Department of Adult, Vocational and Technical Education, 1977). A service project in Los Angeles focused on services and included a project for the deaf (Browning, 1978). The DeAnza College (Reid, 1978) program, an exemplary project for students from ages sixteen to one hundred, and the San Diego comprehensive plan and services for the disabled (Resource Center for the Handicapped, 1977), provided further references in the area of services for the handicapped at the community college.

Two projects were related to employment for the handicapped student, a subject of some concern to the participants of the Delphi study. One reported on an innovative service demonstration for severely disabled students in California (Roberts and Brown, 1976) and another project prepared by The Regional Affirmative Action Clearinghouse (1976), reported on attitudinal barriers of employment. A report from Florida reviewed staff development materials, especially developed to help mainstream the handicapped student in vocational education (Schwartz, 1978).

Reports of programs and services for the physically disabled (New York, State University of, 1976; New York, State University of, 1977; and Florida State Advisory Council, 1977) were also important: nineteen of the participants were physically disabled, and most barriers and recommendations were related to physical disabilities. Reports from Maryland (Harkins, May 23, 1978, and Kitt, Schuster and Rapp, 1977) summarized studies concerning deaf students and students with epilepsy, two conditions represented by the Delphi participants.

A basic reference was a report on a barrier identification project (Kumar, 1977) conducted with handicapped post-secondary students studying Vocational Technical and Adult Education (VTAE) in Wisconsin. VTAE project investigators also adapted the classification of barriers found in Barriers and Bridges (Phillips, et al., 1977).

The Operational Guideline: Programs for the Handicapped (Smith, 1977) was designed to assist community colleges in complying with regulations protecting the handicapped. Although designed as a reference guide only, this resource contributed to the Delphi study in the areas of administration, student participation, budgeting for programs and services, and implementing, reporting, and evaluating programs and services.

Although few literature references were available for this study, recent project and research reports provided information to establish a basis for research, especially as the reports addressed barriers, how they could be removed, and the tasks necessary to remove them.

CHAPTER III

PROCEDURES, INSTRUMENTS AND DESIGN OF DATA COLLECTION

This chapter will describe the methodology and design for study. Following a statement of the hypotheses, Part I describes the policy focus Delphi study. In Part II procedures are discussed relating to the way handicapped students at community colleges rated the feasibility of implementing recommendations for removing barriers which were then compared to the way the Delphi survey participants rated the feasibility of implementing recommendations. Chapter III will "set the stage" for the analysis of data in Chapter IV.

Hypotheses

In the first part of this study, experts participating in the policy Delphi exercise were asked to identify and recommend ways to remove the barriers which affect handicapped persons in community college vocational technical programs. Because this design allowed no guarantee or control for a specified outcome (Turoff, 1970) there is no formal prediction model, and thus no formal hypothesis in this section of the study. Inferential statistics associated with hypothesis testing are replaced by accurate descriptive statistics reviewing the identified barriers and preferred solutions of the panel of experts (Delbecq, Van de Van, and Gustafson, 1975).

The second part of the research followed a modified action design, developed to seek solutions to problems in a working setting (Isaac and Michael, 1974). A consumer group--handicapped students in vocational programs--was requested to rate the feasibility of the recommendations for removing barriers and those ratings were compared to the feasibility ratings of the participants of the Delphic exercise. The chosen hypothesis was that there would be no significant difference between the participant group and the consumer group.

Part I: Policy Focus Delphi Study

Part I includes the description and background of the policy focus Delphi technique, the preliminary planning for the study, the collection, analyses and synthesis of the data, and a discussion of the evaluation of the findings and presentation of the results to the steering committee.

The Delphi Technique

The Delphi technique, commonly used to examine policy issues was adapted in this study to determine the barriers which impede handicapped students from successfully enrolling and/or completing vocational technical courses in community colleges. In this study the Delphi technique was also used to ascertain how these barriers could be removed. As defined by Turoff (1970) the Delphi technique is a "method for the systematic solicitation and collation of informed judgments on a particular topic" (p. 149).

A policy Delphi technique was chosen for this study because it is most appropriate when little or no information regarding social problems exists and when there are policy issues. A policy issue is defined by

Turoff (1970) as "an issue for which rational individuals advocate differing resolutions" (p. 149). The policy focus Delphi technique could be part of the initial phase of a Program Planning Model (PPM), a sociological model which develops an orderly process of structuring decision making (Delbecq and Van de Ven, 1975). The problems encountered in removing barriers for handicapped students in community colleges in Texas appear to be similar to general problems faced by community planners who used the Program Planning Model:

> . . . needed physical and financial resources, technically trained personnel, and legitimating power are often locked within established business, political, and social institutions. Each of these institutions, itself, may be only moderately malleable. The character of difficulties in achieving innovation within established bureaucratized organizations is well documented in the literature. The problem of community planners transcends these intraorganizational difficulties since they must coalesce resources from a number of organizations. Further, since political units crisscross the metropolitan conglomerate but seldom encompass it, problems of legitimacy are compounded.
>
> An additional problem is (lack of) sufficient expertise to deal with complex problems. The combination of the "information explosion" together with increasing specialization has made the term "interdisciplinary" a euphemism.
>
> Finally, the appropriateness of technocrats' unilaterally "planning for" communities may well have passed. The involvement of citizens, clients, low-income neighborhood groups, concerned political representatives, and others makes the questions of "subsidiarity" and "Maximum Feasible Participation" most important concerns for community planning. (Delbecq and Van de Ven, 1975, p. 149)

In a discussion of design options in operations research and management science, McNamara (1976) discussed directions for policy analysis that Yehezhel Dror had suggested (cited in McNamara, 1976) and that Aaron Wildavsky (cited in McNamara, 1976) had examined:

> 1. Much attention would be paid to the political aspects of public decision-making and public policy-making (instead of ignoring or condescendingly regarding political aspects) . . .
>
> 2. A broad conception of decision-making and policy-making would be involved (instead of viewing all decision-making as mainly a resources allocation). . .
>
> 3. A main emphasis would be on creativity and search for new policy alternatives, with explicit attention to encouragement of innovative thinking . . .
>
> 4. There would be extensive reliance on . . . qualitative methods . . .
>
> 5. There would be much more emphasis on futuristic thinking . . .
>
> 6. The approach would be looser and less rigid, but nevertheless systematic, one which would recognize the complexity of means-ends interdependence, the multiplicity of relevant criteria of decision, and the partial and tentative nature of every analysis . . . (McNamara, 1976, p. 143)

The policy Delphi technique is a fairly new option for research, and although the technique currently has uncertain guidelines, the following consistencies have warranted general agreement:

> Definition
>
> A method for the systematic solicitation and collation of informed judgments on a particular topic.
>
> Procedure
>
> A set of carefully designed sequential questionnaires interspersed with summarized information and opinions feedback derived from earlier responses.

> Possible Objectives
>
> To determine or develop a range of possible alternatives.
> To explore or expose underlying assumptions of information leading to differing judgments.
> To seek out information which may generate a consensus of judgment on the part of the respondent group.
> To correlate informed judgments on a topic spanning a wide range of disciplines.
> To educate the respondent group as to the diverse and interrelated aspects of the topic. (Turoff, 1970, p. 149)

Variations can be applied to any study, variations which raise questions with no general agreed upon answers among Delphi users. Some questions pertinent to this study are:

> Is the respondent group completely anonymous among its own members, or to the design team, or to the user body?
>
> Should the Delphi be used in conjunction with a committee or ongoing study effort?
>
> Must the design team be knowledgeable in the subject material or do they rely on the respondents to fill out the subject material?
>
> Should the iterations (feedback) be cycled to the same respondent group or is there a series of separate respondent groups interacting serially or parallel with one another?
>
> How much freedom should be given the respondent group to change the nature of the issues presented?
>
> How many iterations are needed? And why?
>
> What do you feed back into the iterations, and what do you eliminate?
>
> How do you evaluate your respondent groups as to their expertise or do they evaluate themselves?
>
> Do emotional arguments convey content that should be retained in the exercise?
>
> How homogeneous or heterogeneous should the respondents be? (Turoff, 1970, pp. 150-151)

Even with these unanswered questions, the Delphi technique is growing in popularity as a research method for planning and technological forecasting (Turoff, 1970).

A policy Delphi study forms policy through a committee which has the ability to implement or use the results of the study. Policy formation is not the responsibility of the respondents in the policy Delphi process; instead, they are "precursors" to the policy committee activity. Because of the way the information will be used, the respondents of the Delphi study should be "experts" who can offer biased, rather than unbiased opinions--that is, the respondents' extensive knowledge and information gained by experience are necessary for the technique's success (Turoff, 1970).

In selecting the Delphi respondents, Turoff (1970) recommends they be diversified individuals at a fairly high level of responsibility and are in a position to understand the total scope of the exercise. The Delphi method is thought provoking, and for this reason, the respondents will need to understand that the questionnaires will be time consuming and require careful attention.

Turoff's (1970) suggestions have been useful to this study, especially suggestions for designing the study, selecting respondents, and selecting scales to determine the severity of barriers and the feasibility of removing those barriers. Turoff's definition, procedures and objectives were applied to the study and served as guidelines during the design phase of the Delphi rounds.

The three major exercises of this policy focus Delphi study are presented in the following sections. For further clarification, the phases of the major exercises and accompanying activities are presented in a graphic format in Figure 3 which outlines the activities of Part I of the study.

Preliminary Planning

Phase 1: Eleven types of persons were selected for the steering committee, representing state agencies, educational institutions (both secondary and post-secondary), handicapped students and a person who would provide a national perspective of post-secondary educational opportunities for handicapped students. The types of persons selected, numbers of representatives, and the agencies or institutions they represent are presented in Table II.

Recommendations for steering committee members were solicited from public agency administrative personnel, supervisory personnel, instructors, Texas Rehabilitation counselors, community college vocational directors, and coordinators of pilot projects sponsored by the Texas Rehabilitation Commission. Members of the steering committee and persons who recommended them are included in Appendix B.

The responsibilities of the steering committee were:

1. To identify participants for three rounds of the Delphic study.
2. To respond to three rounds of the Delphic study.
3. To identify ways to implement the results of the study.

	STEERING COMMITTEE	RESPONDENTS	ANALYSIS
Preliminary Planning	Phase 1: Selection of Steering Committee		
	Activity 1: Select Steering Committee		
	Activity 2: Initial meeting of the Steering Committee		
	Phase 2: Identification of Delphic Respondents		
	Activity 3: Identify respondents 1) Principal 2) Alternate		
	Activity 4: Solicit agreement of design of questionnaire (steering committee)		
Collection Analyses, and Synthesis of Data	Phase 3: Preparation of Round I Questionnaire	Phase 4: Collection of Round I Responses	Phase 5: Analyses of proposed barriers
	Activity 5: Design instrument (utilize assistance of sub group of steering committee)		Activity 8: Item analysis
	Activity 6: Pilot test instrument		Activity 9: Prepare draft interpretation
	Activity 7: Solicit approval of final form from sub group of the steering committee		Activity 10: Prepare report for steering committee-sub committee Round One synthesis
	Phase 6. Preparation of Round II Questionnaire	Phase 7: Collection of Round II Responses	Phase 8: Analysis of ratings and proposed solutions
	Activity 11: Solicit approval of the steering committee sub group	Activity 12: Analysis of Round II	
		Activity 13: Prepare and feed back information	
	Phase 9: Preparation of Round III	Phase 10: Collection of Round III Responses	Phase 11: Analysis of proposed solutions
Evaluation and Policy Analysis	Phase 12: Analysis of recommendations for task identification and policy implications		
	Phase 13: Steering Committee Reanalysis		
	Activity 14: Presentation of identified tasks and ratings of desirability, feasibility and cost effectivness		
	Activity 15: Solicitation of agreement or disagreement from steering committee members		

FIGURE 3: PHASES OF THE POLICY FOCUS DELPHI STUDY

TABLE II

SELECTION OF STEERING COMMITTEE

Types of Steering Committee Members Selected	Numbers of Representatives	Agency or Institution
Handicapped students from the vocational technical programs	2	Users of services of vocational programs at the community college
Secondary Education Personnel	2	The largest feeder system which refers students to community college vocational programs
Community College Vocational Directors	2	Persons responsible for the administration of programs at the local level
Community College Vocational Program Personnel	3	Persons directly responsible for the students' program
Pilot Projects Sponsored by Texas Rehabilitation Commission (TRC)	4	Facilitators of programs for handicapped students in four community colleges in Texas
Post-Secondary Teacher Educator(s)	1	Teacher trainers who provide instructional techniques for vocational instructors
Texas Education Agency, Department of Special Education	1	State agency personnel who provide consultative service to the state's educational facilities
Texas Education Agency, Department of Occupational Education and Technology	1	Administrators of community college vocational programs at the state level
College Coordinating Board	1	Administrators of academic studies which are sometimes part of vocational technical programs
Texas Rehabilitation Commission	1	Users of community college vocational classes as training facilities for handicapped clients
National Consultant	1	An expert who can provide a perspective of national efforts to the appropriate education for the handicapped.

The steering committee met February 10, 1978. A copy of the letter invitation, an abstract of the study presented to the members of the steering committee and minutes of the meeting are included in Appendix B. At the initial meeting the steering committee identified the criteria for successful completion of programs in vocational technical education by handicapped community college students, and identified and ranked barriers which impede this successful completion (Appendix B). A tentative Round One of the Delphic exercise was also submitted to the steering committee and they agreed on the general design of the instrument.

Phase 2: Steering committee members were then invited to nominate three participants and as many as three alternatives, their choice being governed by the nominee's knowledge of community college vocational programs, their ability to identify what assistance handicapped students need to successfully learn vocational skills, and their knowledge of the current barriers in community colleges which keep handicapped students from either enrolling in or completing vocational programs. Three members were unable to attend the meeting. Of these, one submitted nominations at a later date.

A letter (February 18, 1978, Appendix C) was mailed to each person nominated, briefly explaining the study and the Delphi technique. It also outlined the responsibilities of the participant:

Complete the Round One Questionnaire (mailed to participant)
Complete the Round Two Questionnaire (mailed to participant)
Attend a two-day workshop, May 4 and 5, 1978
Complete the Round Three Questionnaire

The abstract of the study and an agreement form were enclosed (Appendix C). Of the seventy persons invited to participate in the study, fifty-three accepted. Of the seventeen who did not participate, eight returned the form or contacted the office to decline the invitation.

A follow-up letter (March 11, 1978) was mailed to persons who agreed to participate in the study. This letter included the objectives of the study, names of the steering committee, definition of terms, and the tentative agenda of the workshop on May 4 and 5, 1978 (Appendix C).

Collection, Analyses, and Synthesis of Data

Round One. *Phase 3:* The Round One questionnaire was prepared with the assistance of the Texas A&M University faculty committee supervising this study and suggestions made by the steering committee members. A pilot test was then conducted with two handicapped students who attended community college vocational technical programs, a coordinator of evening classes in a community college, and a TRC counselor. The pilot test indicated a need for more information about the respondent, especially if the respondent had a handicapping condition.

The prepared questionnaire was then submitted to five steering committee members for their approval on the general design of the instrument. Except for two comments concerning the lines dividing the handicapping conditions and the barriers, the steering committee offered no other suggestions for changing the instrument.

Phase 4: During the latter part of March a survey packet (Appendix D) was sent to the nineteen steering committee members and to the fifty-four additional participants selected by the steering committee (Appendix E). The packet included:

1. A cover letter which explained how the information would be used, and gave examples of barriers to help stimulate participants to describe barriers.
2. The Round One questionnaire.
3. A form requesting personal information.
4. A form requesting ratings of criteria necessary for handicapped students to successfully complete vocational/technical programs in community colleges.

Numbers were assigned to the returned questionnaire, and these numbers also provided identification for steering committee members and participants for the remainder of the study.

Round Two. *Phase 5:* A total of 402 barriers were tallied from the sixty-three questionnaires returned by April 14. These barriers were analyzed, combined, and condensed so that Round Two contained only 198 barriers. Marjorie Hanson, a consultant approved by the graduate committee, assisted in the item analysis. Careful attention was given to the general intent and meaning of each barrier, and although the barriers were combined and condensed, each was represented. Each barrier was then standardized to maintain consistency.

Severity ratings of barriers were on a scale of one through four, one being "very severe", two, "moderately severe", three "slightly severe", and four, "not severe". Each participant was asked to rate the barrier according to its severity, then make recommendations for removing the "very severe" and "moderately severe" barriers.

Barriers were grouped into the three broad classifications described in Barriers and Bridges (Phillips, et al., 1977), under which more specific groupings were identified as follows:

Barriers Within the Helping System

- Legislation
- Planning and Preparation
- Personnel: Support Services
- Attitudes of Community College Personnel
- Attitudes of Non-Disabled Students
- Preservice and Inservice Education
- Prevocational Training
- Vocational Instructional Programs and Services
- Vocational Materials and Equipment
- Research
- Counseling, Placement and Followup
- Student Accounting System
- Lack of Financial Resources

Barriers Within the Society

- Lack of Knowledge About the Helping System
- Attitudinal Barriers
- Inadequate Leadership
- Media Barriers
- Transportation
- Employment Barriers
- Architectural Barriers Off Campus
- Competing Demands

Barriers Within the Handicapped Person, Their Families and Other Advocates

- Handicapped Persons: Physical/Mental/Emotional Problems
- Handicapped Persons: Lack of Knowledge
- Handicapped Persons: Behavioral Barriers
- Negative Attitudes and Feelings
- Family Members
- Barriers Within Advocates for Handicapped Persons

Phase 6: A draft of the Round Two questionnaire was submitted to six members of the steering committee. This sub-committee was asked to appraise the intent of each item and the directions for the questionnaire. The concluded that although the questionnaire was somewhat lengthy, they understood the items and instructions.

Phase 7: The Round Two questionnaire and cover letter (Appendix F) were mailed to participants on April 20, 1978, with the request that they return the instrument by April 28, 1978. In addition, telephone calls were made to each participant requesting the early return of the instrument. As a result, fifty-five questionnaires were returned by May 1. Five other instruments were returned later, a total of 85 percent (One steering committee member moved after Round I).

Phase 8: The Statistical Package for The Social Sciences (SPSS) (Nie, Bent and Hull, 1970) subprogram, FREQUENCIES, was used to obtain the mean of the ratings of severity of the barriers and the percent of responses falling in each level of severity.

Round Three. *Phase 9:* The relative frequency (percent) of how the participants rated the severity of the barriers was then reported in the Round III Questionnaire along with the mean score of all the respondents. The participants were asked to examine the frequency ratings of the barriers, mark any mean score they felt was too high or too low, and explain their reason(s) for disagreeing with the score.

Phase 10: The Round Three questionnaire (Appendix G) was distributed at a workshop designed for the participants of the study. According to Kerlinger (1967), this method is preferable to mailing out questionnaires. Nevertheless, because only forty-one of the seventy-one participants attended the workshop, the questionnaire was mailed to the participants who did not attend the workshop. Fifty questionnaires (70%) were completed for this round.

Phase II: Comments received from the Round Three questionnaire were summarized. Participants did not respond to each item, but selected only the items with which they disagreed. Comments were again combined and condensed, attention being given to the general intent and meaning of each comment. Many comments were actually recommendations for removing the barriers rather than reasons for disagreement.

Part II: Comparative Ratings of Consumers and Participants

The second part of the study was a comparison of ratings of the feasibility of implementing recommendations for removing barriers made by handicapped community college vocational students with the ratings of the participants of the study.

The questionnaire requesting ratings of feasibility (Appendix H) presented the barriers, recommendations solicited from Round Two of the Delphic exercise, and a rating scale. Recommendations received from Round Two were carefully examined according to meaning and general intent, and were combined whenever there was duplication, with a resulting 351 recommendations for the removal of the 198 barriers.

The questionnaire was distributed to the participants who attended the workshop and mailed to the persons who were not in attendance. The questionnaire was divided into three parts because of the length. Barriers 1 through 66 were in the first part, barriers 67 through 136 in the second part, and barriers 137 through 198 in the third part. Questionnaires were randomly distributed to participants at the workshop and randomly mailed to the participants who were not in attendance. Forty eight completed questionnaires were returned by participants.

The questionnaire was also completed by handicapped students in vocational technical programs in community colleges. After the inquiry was endorsed by representatives of the Texas Rehabilitation Commission, each of 51 TRC counselors selected two students to complete the questionnaire. The counselors were mailed the following information (Appendix H):

1. A memorandum to the rehabilitation counselor explaining the nature of the study.
2. A copy of the memorandum from John A. Fenoglio.
3. A letter to each student.
4. A form requesting information regarding the student's handicapping condition, vocational program, age, sex, type of expected employment and the name of the student's community college.
5. Objectives of the study.
6. The questionnaire--Feasibility Ratings for Removal of Barriers.

Ratings of the feasibility of implementing recommendations received from the participants and students were compared by applying a Wilks' Lambda Test of Significance.

Evaluation and Analysis of Data

Phase 12: As a final summation and analysis of the results of this study, the investigator conducted a factor analysis of the 351 recommendations and identified twenty-nine general tasks which might be implemented and would relate to the formulation of policies to enable the handicapped to enroll in and complete vocational technical programs of instruction in community colleges. The factor analysis was also based on findings from the review of literature and information received from research and projects. The investigator then rated each of the tasks according to the desirability, feasibility and cost effectiveness of performing the tasks.

Phase 13: The twenty-nine tasks and summarized recommendations relating to the tasks were mailed to the members of the steering committee requesting their responses regarding agreement or disagreement with the appropriateness of the tasks and ratings of desirability, feasibility and cost effectiveness (Appendix I). Steering committee comments are presented in Chapter IV.

The findings of the study are summarized in Chapter IV where they are presented in a series of tables and narrative. Conclusions and recommendations of the study are presented in Chapter V.

CHAPTER IV

PRESENTATION OF THE DATA

In this chapter findings concerning the criteria for successfully completing vocational/technical programs by handicapped students in community colleges are presented, as well as an analysis of the data from the Delphic study. This includes barriers, recommendations for removing those barriers, ratings of both the severity of the barriers and of the feasibility of the recommendations made to remove the barriers. Participant's ratings of the feasibility of implementing the recommendations are compared with the ratings made by consumers (community college vocational students who were handicapped). Twenty-nine general tasks to be implemented by community colleges, advocates for the handicapped, or agencies responsible for the handicapped are presented as a result of an analysis of the recommendations for removal of barriers. Data have been summarized in a series of tables and in the narrative of this chapter.

Criteria for Successful Completion of Vocational Technical Programs

Seven criteria for successfully completing vocational technical programs by handicapped students in community colleges were identified by the steering committee and presented to the participants in Round One. The criteria, with the numbers of participants selecting each criterion, are presented in Table III. Sixty-seven of the seventy-two participants responded to this part of the questionnaire; most selected more than one criterion. Two participants stated that criteria other

Table III

CRITERIA FOR SUCCESSFUL COMPLETION OF VOCATIONAL TECHNICAL PROGRAMS

Criteria	Numbers of Participants Selecting Criterion*
Acquisition of sufficient job skills to become successfully employed	48
Acquisition of sufficient skills to live a productive self-sufficient life	39
Acquisition of sufficient skills to compete in the world of work with non-disabled individuals with similar training	38
Sufficient acquisition of skills to meet personal, individual goals	33
Certification in the technical area for which the student is trained	30
Successful employment to the maximum potential of the person's earning power	29
Completion of an associate degree	17
Other Criteria	
Acquisition of interpersonal relationships with employers and employees	1
Maintaining employment in the related field of training	1

N = 67

* Participants could select more than one criterion

than those presented were necessary for the successful completion of vocational technical programs by handicapped students. These are also presented in the table.

Presentation of Data Collected from Participants

Barriers, recommendations for removing the barriers, ratings of both the severity of the barriers and of the feasibility of recommendations for removing barriers, and comments regarding the barriers are presented in Table IV which comprises pages 81 to 132 of this chapter. Each of the 198 barriers is listed under the following three large classifications, and sub-classifications.

- Barriers Within the Helping System
  - Legislation
  - Planning and Preparation
  - Attitudes of Community College Personnel
  - Attitudes of Non-Disabled Students
  - Preservice and Inservice Education
  - Prevocational Training
  - Vocational Instructional Programs and Services
  - Vocational Materials and Equipment
  - Research
  - Counseling, Placement and Followup
  - Student Accounting System
  - Lack of Financial Resources
- Barriers Within the Society
  - Lack of Knowledge About the Helping System
  - Attitudinal Barriers
  - Inadequate Leadership
  - Media Barriers
  - Transportation
  - Employment Barriers
  - Architectural Barriers Off Campus
  - Competing Demands
- Barriers Within the Handicapped Person, Their Families and Other Advocates
  - Handicapped Persons: Physical/Mental/Emotional Problems
  - Handicapped Persons: Lack of Knowledge
  - Handicapped Persons: Behavioral Barriers
  - Negative Attitudes and Feelings
  - Family Members
  - Barriers Within Advocates for Handicapped persons

Recommendations for removal of barriers are listed under each related barrier. Numbers of recommendations under each barrier vary from no recommendations to as many as five recommendations.

Sixty respondents rated the severity of the barriers. These are presented by percentages in the second column of the table.

The participant also rated feasibility of implementing recommendations, as indicated by the percentages in the third column. The numbers of respondents who rated each item is beside the percentage figure. Each participant rated one-third of the recommendations for the removal of barriers.

The comments of the respondents registering disagreement with the ratings of severity of the barriers are summarized in the last two columns of the table. Respondents often limited comments to "too low" or "too high". The figures in parenthesis represent the number of respondents who disagree on the ratings. Although comments were of interest, it appears that the number of comments and disagreement with ratings were not of sufficient number of change the ratings of severity appreciably.

TABLE IV

A SUMMARY OF THE SEVERITY OF BARRIERS FOR THE HANDICAPPED AND FEASIBILITY OF RECOMMENDATIONS TO REMOVE BARRIERS

In the first column, barriers are listed (example: 1.0) as well as the recommendations for removing these barriers (example: 1.1).

The second column reports how respondents rated the severity of each barrier: 1 being very severe, 2 being moderately severe, 3 being slightly severe, 4 being not severe and no response (NR). The column includes the percentages.

The third column reports how feasible the respondents judged the recommendations to be, 1 being definitely feasible, 2 being feasible, 3 being possibly feasible, 4 being possibly unfeasible, 5 being definitely unfeasible. Each member was randomly assigned to only 1/3 of the recommendations. The column includes the rating scale, the percentages and numbers of respondents.

The last two columns report the respondents' comments about the severity of barriers. Respondents often limited their comments to "too low" or "too high". Numbers in parentheses indicate the numbers of respondents.

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
BARRIERS WITHIN THE HELPING SYSTEM												
Legislation												
1.0 A general lack of knowledge in the academic community of Section 504 of the Rehabilitation Act of 1973	11.7	38.3	41.7	8.3	0						1.0 (6) Community College Personnel need more awareness of this act. There is a need to support legislation for credible enforcement. Needs to be more information and attitudinal change regarding 504.	
1.1 Inform via workshops, printed material, administrative policy.						61.5 N = 13	30.8	7.7	0	0		
1.2 Each organization should adopt policies to implement locally.						38.5 N = 13	15.4	30.8	7.7	7.7		
1.3 Legislators should be requested to make wording less difficult						15.4 N = 13	23.1	23.1	38.5	0		
1.4 Communicate and disseminate through news media.						38.5 N = 13	23.1	15.4	23.1	0		
1.5 Provide orientation seminars on the nature and effect of Section 504 for key administrative personnel.						30.8 N = 13	69.2	0	0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY BY IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
2.0 Social Security Disability Insurance legislation which inhibits initiative to prepare for employment	12.7	34.5	45.5	7.3	5						2.0 (10) SSDI can and does inhibit motivation. Benefits could be modified to both maintain security and promote employment, however, it is extremely difficult to convince someone drawing social security that would be better off without it. Legislation needs to be amended to create more incentive for people to get back to work.	2.0 (1) Should be rated less severe.
2.1 Make these funds available for vocational education.						45.5 N = 11	18.2	27.3	0	9.1		
2.2 Remove earnings limitations.						36.4 N = 11	27.3	9.1	27.3	0		
2.3 Provide yearly interviews by rehabilitation counselors.						45.5 N = 11	36.4	9.1	9.1	0		
Planning and Preparation												
3.0 Inadequate planning on the part of the administrative staff for individual student needs of the handicapped such as language barriers.	21.7	45.0	26.7	6.7	0						3.0 (9) This is the most essential step in providing adequate programs for handicapped students. Should be rated very severe. Should be higher. Organizational action, i.e., change begins at the top (usually). Problems exist so responsibility for correction lies with administration which is not doing much at this point.	3.0 (1)
3.1 Establish inservice training for community college administrators.						33.3 N = 12	33.3	25.0	0	8.3		
3.2 Establish an affirmative action program to include handicapped students.						16.7 N = 12	50.0	8.3	16.7	8.3		
3.3 Include this type of assistance in curriculum.						18.2 N = 11	27.3	45.5	0	9.1		

Table IV - Continued

BARRIERS AND RECOMMENDATION	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
4.0 General lack of communication between helping agencies and the training institution.	20.0	36.7	41.7	1.7	0						4.0 (9) Agencies do not communicate efficiently, therefore, administrators and students do not know of help that is available. Should be rated more severe because of 1) complexity, 2) overlaps of responsibility for the funding process and 3) lack of involvement in professional rehabilitation process. Emphasis should be on the client.	4.0 (3) Too high.
4.1 Assign a liaison person to each community college						41.7 N = 12	33.3	8.3	16.7	0		
4.2 Establish interagency committees to provide for more exchange of information.						50.0 N = 12	8.3	25.0	16.7	0		
4.3 Provide information in preservice training at colleges and universities						50.0 N = 12	25.0	25.0	0	0		
5.0 Too few certified rehabilitation counselors on campuses of the training institution.	20.0	38.3	26.7	15.0	0						5.0 (8) More qualified counselors need to give in-depth service.	5.0 (2) Problem not severe enough to warrant consideration.
5.1 Establish some type of funding formula to assure an adequate ratio of rehabilitation counselors to students.						25.0 N = 12	50.0	16.7	8.3	0		
5.2 Make the job of counselor more attractive to new or prospective counselors.						25.0 N = 12	50.0	16.7	8.3	0		
5.3 Provide the "common client" concept where various institutions pool resources and focus on a common client.						16.7 N = 12	16.7	58.3	0	8.3		
6.0 Lack of organizational structures which insure meaningful interaction between handicapped and nondisabled students	10.0	30.0	41.7	18.3	0						6.0 (8) Administrators must take action to insure that nondisabled become involved. Better understanding of handicapped individual situation is essential to assist the removal of attitudinal barriers.	6.0 (3)
6.1 All programs should be designed to avoid lack of integrated activities.						25.0 N = 12	8.3	41.7	25.0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
6.2 Seek specific kinds of commitments and actions from top administrative staff.						12.5 N = 8	12.5	75.0	0	0		
7.0 Poor planning and organization which results in social barriers, i.e., inability to participate in concerts, hear speakers or attend films.	11.9	32.2	40.7	15.3	1						7.0 (8) Should be recognized as more severe. Buildings are inaccessible. Emotional, recreational, social well being of both handicapped and non-handicapped depend on an integrated setting in school and in employment later.	7.0 (4)
7.1 Lack of planning is not usually intentional, therefore, policy statements and written reminders should be implemented.						33.3 N = 12	41.7	25.0	0	0		
7.2 Conduct work[illegible] in-service trainin[illegible] plan and organize to assist the handicapped in participating in social events						33.3 N = 12	50.0	8.3	8.3	0		
8.0 Lack of planning for required activities which are difficult for handicapped students such as registration.	11.7	36.7	38.3	13.3	0						8.0 (9) Physical handicaps get attention, but language learning disabled students or hard of hearing students have huge problems in this area. Special accommodations should be made for handicapped people.	8.0 (6) Not severe - most institutions know the situation.
8.1 All agencies should cooperate in making recommendations to school officials.						50.0 N = 12	25.0	8.3	16.7	0		
8.2 Plan a different procedure for disabled students.						41.7 N = 12	33.3	8.3	0	16.7		
9.0 Inadequate availability of readers, interpreters, tutors and counselors for handicapped students.	20.3	44.1	22.0	13.6	1						9.0 (11) This service makes the difference between students being able to complete programs or not.	9.0 (3) Rehabilitation commissions provide funds for these services when need is recognized.
9.1 Develop a system for vocational resources similar to the Texas Learning Resource Center network, to locate all available resources.						36.4 N = 11	54.5	9.1	0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
9.2 Secure funding for such positions on community college campuses.						25.0 N = 12	25.0	41.7	8.3	0		
9.3 Establish training programs for these helpers.						41.7 N = 12	41.7	16.7	0	0		
10.0 Lack of funds for support services and staff (i.e., wheelchairs, pushers, attendants, note-takers, interpreters, tutors, etc.)	20.7	41.4	27.6	10.3	2						10.0 (10) There is not enough staff to meet the needs of the handicapped (include typists). Additional funding is needed to add staff and services. Will become more severe if current court cases put responsibility on colleges rather than rehabilitation agencies.	10.0 (2)
10.1 Obtain legislative support (funding).						50.0 N = 12	25.0	16.7	8.3	0		
10.2 Establish priorities for current funding which would designate (facilitators) for vocational training (human or material) as a top priority.						33.3 N = 12	25.0	25.0	16.7	0		
10.3 Establish training programs for these helpers.						50.0 N = 12	33.3	16.7	0	0		
11.0 Lack of initial and ongoing mobility orientation	5.1	23.7	52.5	18.6	1						11.0 (3)	11.0 (2)
11.1 Should be stressed by the agency involved and put in budget by the community college administration.						50.0 N = 12	0	50.0	0	0		
12.0 Lack of skilled interpreters for the deaf in all classes including vocational technical classes	19.6	45.4	25.0	8.9	4						12.0 (10) Need more interpreters with skill of sign language. An extreme and urgent need.	
12.1 Training of student service personnel and funds must be made more available.						41.7 N = 12	33.3	16.7	8.3	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
13.0 Lack of available qualified tutorial and remedial assistance for people who cannot cope with regular group and classroom procedures	17.5	35.1	36.8	10.5	3						13.0 (15) Lack of trained peer helpers and professionals is too often overlooked. Remedial assistance makes the difference, whether handicapped or not. Very severe--tutoring essential for all sensorily handicapped. Need to retrain surplus special educators to work at the college level.	13.0 (2)
13.1 Change attitudes of personnel who fail to realize the need for this assistance.						16.7 N = 12	16.7	33.3	16.7	16.7		
13.2 Provide appropriate training programs for personnel to develop tutorial and remedial assistance.						25.0 N = 12	50.0	25.0	0	0		
13.3 Secure funding for such positions on community college campuses.						33.3 N = 12	33.3	8.3	25.0	0		
14.0 Lack of persons to work with the handicapped to give additional training when needed by private business as it relates to specific job needs	16.1	37.5	39.3	7.1	4						14.0 (13) This is a severe problem which could be solved by having trained curriculum specialists and instructors on the staff to work directly with industry. Cost needs to be absorbed by private business. Should be higher--has a threefold benefit: business gets involved, students are better trained to work in business, and business wants more students.	14.0 (1)
14.1 Business might provide personnel to work with handicapped persons.						8.3 N = 12	25.0	33.3	25.0	8.3		
14.2 Provide training and funds for job placement personnel.						33.3 N = 12	16.7	33.3	16.7	0		
15.0 Lack of knowledge of what students can do resulting in negative attitudes toward the limitations of the handicapped students.	32.2	39.0	27.1	1.7	1						15.0 (7) Speaks to the need for professionals in rehabilitation to be on the campus. Priority should be in teacher training.	15.0 (2)

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGES (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGES					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
15.1 Provide inservice programs to educate teachers and administrators and bring about attitudinal changes (especially in the case of mental handicaps).						33.3 N = 12	41.7	16.7	0	8.3		
15.2 Establish more preservice training in universities concerning resources which are available to handicapped, how to access resources, and how to use these resources.						50.0 N = 12	41.7	8.3	0	0		
16.0 Lack of knowledge and experience on the part of educators that would make them unwilling to hold students to the same standards of performance of non-handicapped students (example: deaf students)	29.3	29.3	34.5	6.9	2						16.0 (10) This is a high priority item which results from ignorance or lack of training and exposure to handicapped people	16.0 (2)
16.1 Provide inservice sensitivity and awareness to educate persons responsible for the education of the handicapped.						33.3 N = 12	41.7	16.7	8.3	0		
16.2 Establish definitive behavioral objectives and minimum skill levels needed for job entry that must be met in order to complete course.						41.7 N = 12	25.0	16.7	8.3	8.3		
17.0 Inability on the part of the instructors to empathize instead of sympathize	16.9	27.1	45.8	10.2	1						17.0 (9) Only fosters dependency. Although instructors care about handicapped students there is not enough awareness of their needs and feelings.	17.0 (0)
17.1 Provide inservice training for personnel working with the handicapped which include practical applications and activities.						50.0 N = 12	33.3	16.7	0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
17.2 Make information about various handicaps available to instructors.						41.7 N = 12	50.0	0	0	8.3		
18.0 Lack of self-confidence on part of teachers to teach handicapped students	15.5	32.8	41.4	10.3	2						18.0 (13) This is a very severe barrier. This is more of a problem than understanding, acceptance or indifference.	18.0 (1)
18.1 Provide both pre and inservice training for community college faculty						50.0 N = 12	41.7	8.3	0	0		
19.0 Lack of understanding and acceptance and/or indifference toward the special needs of the handicapped on the part of administrators, faculty and staff	29.8	31.6	31.6	7.0	3						19.0 (8) Problem is severe. There is a lack of training and exposure to the handicapped which results in a barrier even when people mean well.	19.0 (5)
19.1 Provide better and more inservices for community college personnel including knowledge and training on techniques of working with the handicapped students.						50.0 N = 12	33.3	16.7	0	0		
20.0 Negative attitudes of administrators and instructors which inhibit participation of handicapped students in college programs.	20.7	27.6	36.2	15.5	2						20.0 (13) Administrators and instructors don't really know the capabilities of the handicapped.	20.0 (2) Should be lower. Most administrators have no attitude (not aware). Few if any, would be negative.
20.1 Design formal courses of study, workshops and inservice training to bring about attitudinal changes (including removal of "fear")						50.0 N = 12	0	25.0	25.0	0		
Attitudes of Non-disabled Students												
21.0 Lack of acceptance and negative attitudes of peers	11.9	25.4	39.0	23.7	1						21.0 (7) More severe than stated. Peers play a larger role than is indicated.	21.0 (5)
21.1 Provide awareness training activities on community college campuses for the student body						33.3 N = 12	25.0	16.7	16.7	8.3		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
21.2 Develop and conduct inservice training for educators to bring about acceptance of the handicapped which will lead to peer acceptance.						25.0 N = 12	25.0	25.0	8.3	16.7		
22.0 Lack of acceptance of handicapping conditions by the public which results in lack of participation by the handicapped in social and recreational aspects of college life	15.0	26.7	55.0	3.3	0						22.0 (11) Very severe. There is little social interaction and we need public awareness.	22.0 (6) Less severe than indicated; the public is accepting handicapped student's participation in social and recreational activities.
22.1 Generally people fear what they don't understand; more information should be provided to the public regarding handicapping conditions.						33.3 N = 12	50.0	0	8.3	8.3		
22.2 Develop and conduct inservice training for teachers and non-handicapped students.						27.3 N = 11	54.5	9.1	0	9.1		
23.0 Inadequate orientation of non-handicapped students as to how they may better understand and assist handicapped students	18.6	49.2	27.1	5.1	1						23.0 (7) More should be stressed at the individual program level. The deaf student needs an interpreter at the college level.	23.0 (1) Orientation is not needed, integration is, for people to be comfortable with each other.
23.1 Provide awareness training activities on community college campuses for the student body.						33.3 N = 12	16.7	25.0	16.7	8.3		
Preservice and Inservice Education												
24.0 Lack of general knowledge of the handicapped and handicapping conditions	22.0	50.8	27.1	0	1						24.0 (13) Handicapping conditions are complex; there is a need for resource people for staff inservice and consultation. Knowledge breeds understanding and acceptance.	24.0 (1)

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents
24.1 Most instructors who are asked to work with handicapped students must learn the hard way--trial and error. Teacher training sessions must include working with handicapped in their own particular discipline.						41.7 N = 12	33.3	25.0	0	0		
25.0 Lack of knowledge that manifestation of handicapping condition is often periodic and unpredictable in timing	6.8	39.0	42.4	11.9	1						25.0 (5)	25.0 ([illegible])
25.1 Information regarding the handicapping condition should be provided to the educator at the time the student registers.						50.0 N = 12	33.3	16.7	0	0		
25.2 Instructors should schedule counseling sessions with all students.						25.0 N = 12	16.7	33.3	8.3	16.7		
25.3 Public relations efforts should be conducted						16.7 N = 12	41.7	41.7	0	0		
26.0 Assumption on the part of the non-disabled instructor, counselor, or administrator that just because the disabled student has not indicated there are problems, that "everything is fine--we have no problems"	10.2	37.3	49.2	3.4	1						26.0 (7) Many do not take this into consideration due to lack of knowledge.	26.0 (1)
26.1 Provide basic knowledge about handicapping conditions through inservice programs						33.3 N = 12	41.7	25.0	0	0		
26.2 Replace the traditional lecture and norm-referenced evaluation with individualized instruction.						18.2 N = 11	9.1	27.3	45.5	0		
26.3 Teach the student to communicate their problems.						41.7 N = 12	25.0	25.0	8.3	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
27.0 Inadequate staff preparation and orientation toward working with handicapped students in the area of various learning modalities	16.7	55.0	25.0	3.3	0						27.0 (14) Much more training and inservice is needed for staff.	27.0 (1)
27.1 Provide staff with useful skills which can be applied in teaching the handicapped through inservice and preservice training.						33.3 N = 12	25.0	33.3	0	8.3		
27.2 Train the faculty and staff to screen and refer students to specialists.						33.3 N = 12	16.7	25.0	25.0	0		
28.0 Inadequate training and information is provided to teachers regarding psychological aspects, and learning difficulties of specific handicapping conditions	28.3	45.0	23.3	3.3	0						28.0 (9) Very severe--except for initial contact at beginning of the semester there is little ongoing communication between teacher and rehabilitation counselor. Teacher training is the key to better education everywhere.	28.0 (3)
28.1 Preservice and inservice training should include basic knowledge about handicapping conditions and stress that wide variances between and among people with the same handicap exists.						33.3 N = 12	41.7	16.7	0	8.3		
29.0 Lack of orientation to receptive expressive language deficiencies and the need for specialized language instruction.	9.1	40.0	36.4	14.5	5						29.0 (8) Rated too low because this is generally not understood, or this need met.	29.0 (1)
29.1 Develop classes for the learning disabled and deaf.						27.3 N = 11	27.3	36.4	0	9.1		
29.2 Pay instructors to attend special inservices.						18.2 N = 11	9.1	36.4	18.2	18.2		
30.0 Lack of programs to prepare post-secondary instructors to teach the handicapped	28.8	49.2	16.9	5.1	1						30.0 (12) Separate programs are not always necessary, but programs should be integral to pre and inservice training. Don't want to train all college instructors to be special education teachers, but they do need resource information.	30.0 (2)

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
30.1 Inservice, or one or two classes in instructor training programs should be provided						33.3 N = 12	33.3	25.0	0	8.3		
30.2 Secure state mandate for such training						8.3 N = 12	16.7	25.0	25.0	25.0		
30.3 Develop an educational program for vocational teacher trainers and Texas Education Agency post-secondary staff.						33.3 N = 12	25.0	33.3	0	8.3		
31.0 Instructors inadequately trained in techniques to assist the handicapped student to adapt standard procedures to meet his requirements.	26.7	45.[illegible]	25.0	3.3	0						31.0 (12) There is a need for specialists in this area to work with instructors to help plan adaptation.	31.0 (1)
31.1 Instructors should be assisted by a resource person (advisor or counselor)						25.0 N = 12	16.7	50.0	0	8.3		
31.2 Provide graduate level seminars and workshops as a part of employment.												
32.0 Lack of knowledge of and sensitivity to handicapping conditions in planning, implementing, and evaluating instruction and vocational learner outcomes	20.3	45.8	25.4	8.5	1						32.0 (12) Many vocational programs base evaluation on typical employment settings and performance and don't consider adaptations which are routinely made for placement of handicapped workers. Should be integral to inservice and preservice training.	32.0 (2)
32.1 Provide inservice training of faculty						33.3 N = 12	33.3	25.0	0	8.3		
32.2 Provide more research in this area						25.0 N = 8	37.5	37.5	0	0		
33.0 Lack of knowledge and training by staff and administration to be informed about the needs of the hearing impaired	16.9	37.3	40.7	5.1	1						33.0 (13) Handicapping aspects of deafness are not really understood.	33.0 (1)
33.1 The needs of the student are generally known, the staff and administration must learn how to meet these needs.						27.3 N = 11	27.3	27.3	9.1	9.1		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
33.2 A resource person should be provided.						25.0 N = 12	33.3	25.0	8.3	8.3		
34.0 Lack of counseling and teaching skills needed to accommodate the handicapped student's uniqueness	11.9	61.0	20.3	6.8	1						34.0 (12) Counseling can be the most important aspect of helping the handicapped by defining expectation levels. Most instructors are not adequately trained in counseling techniques to accommodate any student's uniqueness--not just the handicapped student.	34.0 (3)
34.1 Provide inservice training						50.0 N = 12	16.7	16.7	8.3	8.3		
34.2 Obtain legislative support to add counselors and staff.						28.6 N = 7	14.3	28.6	28.6	0		
35.0 Inadequate training programs for physicians, physical therapists, occupational therapists, and social workers to develop techniques to encourage handicapped individuals to compensate for their disabilities by entering training programs.	12.7	27.3	43.6	16.4	5						35.0 (2) Very few physicians are up on rehabilitation medicine. They know more about acute disease processes than long term rehabilitative efforts.	35.0 (4)
35.1 Research need for training						27.3 N = 11	36.4	27.3	0	9.1		
35.2 Provide more training with emphasis on helping the disabled attain the highest level of skill possible.						33.3 N = 12	16.7	41.7	0	8.3		
36.0 Lack of exposure to the world of work by instructors themselves who often set a poor example (model)	13.3	23.3	36.7	26.7	0						36.0 (5) For vocational teachers this should be a high priority and the teacher should have experience in the "real" world.	36.0 (6) Most instructors bring successful work experience to the community college.
36.1 Obtain assistance from a consultant						16.7 N = 12	16.7	25.0	25.0	16.7		
36.2 Upgrade local hiring practices.						0 N = 12	25.0	41.7	25.0	8.3		
37.0 Lack of ability on the part of the instructor to adapt curriculum to the needs of handicapped students	15.3	28.8	45.8	10.2	1						37.0 (11) There is also a lack of creativity in this area as a result of closed minds.	37.0 (4) The degree of success if determined by how well curriculum is developed in regard to a person's language experience.

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
											RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
	1	2	3	4	NR	1	2	3	4	5		
37.1 Provide an assistant to help the instructor						16.7 N = 12	25.0	33.3	16.7	8.3		
37.2 Provide pre-developed material and instructions for modification of curriculum						8.3 N = 12	33.3	25.0	16.7	16.7		
37.3 Incorporate and integrate training in curriculum adaptation into teacher preparation programs.						16.7 N = 12	25.0	41.7	8.3	8.3		
Prevocational training												
38.0 Lack of approrpiate basic and remedial programs in language and math	11.9	28.8	30.5	28.8	1						38.0 (7) Without good basic skill foundations success in achieving skills will be negligible.	38.0 (3) Question whether this belongs at the community college level, except perhaps through special programs.
38.1 Develop departmental programs						41.7 N = 12	16.7	33.3	8.3	0		
38.2 Make tutorial support available						41.7 N = 12	41.7	16.7	0	0		
38.3 Stress the importance of placing emphasis on these subjects to the high schools						41.7 N = 12	33.3	25.0	0	0		
39.0 Inadequate prevocational skill training	13.6	37.5	25.0	17.9	4						39.0 (13) This should be top priority. Include work readiness training here and most handicapped do not have sufficient skills to suit employers.	39.0 (3)
39.1 Provide more funds for prevocational skill training						25.0 N = 12	16.7	33.3	16.7	8.3		
39.2 Increase emphasis on public school career education, vocational program development and opportunities for participation by handicapped students.						33.3 N = 12	33.3	25.0	8.3	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondent
Vocational Instructional Programs and Service												
40.0 Lack of funds to establish training programs for hearing impaired students	14.2	37.5	30.4	17.9	4						40.0 (10) Lack of funds limit programs for handicapped.	40.0 (0)
40.1 Obtain more funds for training (federal agencies and non-profit organizations)						16.7 N = 12	8.3	50.0	16.7	8.3		
41.0 Lack of short-term specialized courses to teach limited skills in a specified area	13.8	44.8	27.6	13.8	2						41.0 (9) Mini courses could be designed and implemented.	41.0 (2)
41.1 Could be handled through continuing education programs						50.0 N = 12	25.0	8.3	8.3	8.3		
41.2 Per student cost makes funding difficult; pooling of resources may be the answer.						16.7 N = 12	33.3	16.7	25.0	8.3		
41.3 Determine the needed areas and request appropriation of funds.						25.0 N = 12	33.3	25.0	8.3	8.3		
42.0 Inadequate existing programs for deaf and hearing impaired students	7.3	38.2	38.2	16.4	5						42.0 (11) There is a real question of any existing adequate programs. An easy obstacle to overcome, yet often overlooked.	42.0 (2)
42.1 Request additional funding to implement necessary programs						25.0 N = 12	25.0	33.3	16.7	0		
42.2 Individualized contracted instruction can be provided for this student body						8.3 N = 12	16.7	41.7	25.0	8.3		
43.0 Communication problems in all instructional situations with handicapped students.	12.7	30.9	43.6	12.7	5						43.0 (8) Communication problems are severe between instructors and normal students even. Little progress without communication.	43.0 (1)
43.1 Establish an interdisciplinary team to conduct a program review and make recommendations						25.0 N = 12	8.3	50.0	8.3	8.3		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents
44.0 Communication problems in groups where disabled students are working with the non-disabled, such as group lab practicals.	5.3	36.8	40.4	17.5	3						44.0 (6) Orientation and education programs are needed for nondisabled. Public relations programs needed to educate employers as to benefits of employing handicapped persons.	44.0 (2)
44.1 Provide for orientation programs for non-handicapped to acquaint them with problems handicaps have.						8.3 N = 12	33.3	33.3	16.7	8.3		
45.0 Lack of flexibility in the curriculum to allow the student increased instruction in areas of his expertise.	14.0	28.1	40.4	17.5	3						45.0 (10) Without adjustment in curriculum and teaching strategies the doors are closed to skill attainment. Problems with certification of educational requirement through Texas Education Agency.	45.0 (4)
45.1 A resource person and the department responsible need to develop individualized programs for the handicapped.						25.0 N = 12	25.0	25.0	16.7	8.3		
45.2 On-the-job training might be more practical.						16.7 N = 12	41.7	33.3	0	8.3		
45.3 Establish more flexible entry-exit points of skill development.						25.0 N = 12	50.0	16.7	0	8.3		
46.0 Lack of modification of program standards for different handicaps	13.8	29.3	41.4	15.5	2						46.0 (8) Lack of knowledge and lack of creativity in this area.	46.0 (4) Program standards in vocational edu cation are matched to industry standards.
46.1 A resource person and the department responsible need to develop individualized programs for the handicapped.						16.7 N = 12	33.3	16.7	25.0	8.3		
47.0 Lack of behavior modification programs coordinated with both credit and non-credit courses	10.9	20.0	38.2	30.9	5						47.0 (4) This should be developed fully and supported for legislation with funding. There is a great need but whether it is the repsonsibility of the community college is questionable--how about TRC?	47.0 (6)
47.1 Establish an interdisciplinary team to conduct a program review and make recommendations.						25.0 N = 12	25.0	16.7	25.0	8.3		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
48.0 Lack of ongoing contact with the handicapped student to monitor progress and problems and to offer encouragement and support throughout his educational program.	10.3	31.0	43.1	15.5	2						48.0 (11) The problem is severe. There is a need to have Certified Rehabilitation Counselors and peer counselors assigned to each student for the duration of the college program. There is not enough staff to keep up with large populations of handicapped students.	48.0 (0)
48.1 Provide more counselors						33.3 N = 12	25.0	25.0	16.7	0		
48.2 Establish better coordination between agencies and the staff at the community college						41.7 N = 12	41.7	16.7	0	0		
48.3 Establish top priorities for rehabilitation services to provide ongoing support for handicapped students in the early years of training and job experience.						33.3 N = 12	25.0	41.7	0	0		
48.4 Provide individualized educational planning.						33.3 N = 12	25.0	25.0	8.3	8.3		
49.0 Vocational/technical class entrance exams that do not consider handicapping conditions such as learning disabilities in establishing norms.	10.3	36.2	36.2	17.2	2						49.0 (12) There is inadequate preassessment of handicaps. Adaptation of systems approach to instruction will alleviate this to a major extent.	49.0 (2) Do learning disabilities belong in college? Norms need to be more flexible.
49.1 Remove or modify norms to accommodate the handicapped.						27.3 N = 11	18.2	9.1	36.4	9.1		
50.0 Unwillingness of instructors to give oral examinations when appropriate.	12.1	10.3	48.3	29.3	2						50.0 (6) This attitude sets conditions for a student to fail.	50.0 (6)
50.1 Pay instructors for the service.						25.0 N = 12	16.7	8.3	33.3	16.7		
50.2 Enlist help from student assistance						33.3 N = 12	25.0	16.7	8.3	16.7		
51.0 Examinations which are sensorily oriented.	10.7	23.2	44.6	21.4	4						51.0 (3)	51.0 (2)
51.1 Provide alternate methods of testing						25.0 N = 12	41.7	16.7	8.3	8.3		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS: RATED TOO LOW (Numbers of Respondents)	COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS: RATED TOO HIGH (Numbers of Respondents)
	1	2	3	4	NR	1	2	3	4	5		
52.0 Training areas within programs tend to delimit the occupational choices available to students by offering such a narrow range of skill training.	8.8	26.3	43.9	21.1	3						52.0 (6) Lots of individuals get shelved and categorized because it is easier than taking the time to find out what is truly wanted. Limited training programs are available. Still too much stereotyping of disabilities, i.e., all MR's like to do repetitive type jobs.	52.0 (4)
52.1 Broaden the range of skill training.						8.3 N = 12	33.3	41.7	8.3	8.3		
52.2 Awareness of alternatives related to the field should be incorporated in career whorkshops.						25.0 N = 12	16.7	50.0	0	8.3		
53.0 Lack of special adapted vocabulary lists to help students in various occupational technical programs.	10.5	14.0	45.6	29.8	3						53.0 (3) If a student does not understand the terms there is no way he can learn a skill.	53.0 (3)
53.1 Provide reading programs for specific technical majors.						25.0 N = 12	25.0	33.3	16.7	0		
53.2 Necessary materials should be prepared by the faculty/staff concerned.						16.7 N = 12	33.3	33.3	8.3	8.3		
54.0 Lack of modified textbooks to meet language level of students.	13.6	22.0	49.2	15.3	1						54.0 (5) Sensorially handicapped and LLD students need supplemental materials and modified texts. Open door policy requires administration and therefore, accommodation.	54.0 (1)
54.1 Provide modified texts (tape, rewrite) or teach with teacher made materials.						25.0 N = 12	33.3	25.0	8.3	8.3		
54.2 Consult with the book company.						50.0 N = 12	0	33.3	16.7	0		
55.0 Student/trainer ratio too large to allow sufficient individualized hands-on training.	22.0	27.1	37.3	13.6	1						55.0 (9) This should be top priority. Many handicapped are embarrassed to ask for additional help especially in a large class.	55.0 (2) The community college has a policy of small classes and this should not be a problem.
55.1 Provide special assistants, aides and/or volunteers.						25.0 N = 12	16.7	33.3	16.7	8.3		

Table IV -- Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 50)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents) *	RATED TOO HIGH (Numbers of Respondents)
55.2 Obtain legislative support to increase funding for more personnel.						33.3 N = 12	16.7	33.3	16.7	0		
56.0 Student/trainer ratio too large to allow appropriate administration of tests.	19.0	20.7	41.4	19.0	2						56.0 (5) If one cannot evaluate skill levels, then how can one determine progress unless curriculum is based on performance objective. Skill level evaluation is essential.	56.0 (3) Testing situations are feasible; individual testing is easily arranged.
56.1 Provide a specialized testing program.						33.3 N = 12	0	41.7	16.7	8.3		
56.2 Provide funds for better student/trainer ratio or special assistants.						16.7 N = 12	16.7	41.7	16.7	8.3		
56.3 Individualize testing procedures.						16.7 N = 12	41.7	25.0	8.3	8.3		
56.4 Hire a paraprofessional						16.7 N = 12	25.0	16.7	25.0	16.7		
57.0 Inadequate task analysis of technical skill areas in relation to training students with handicaps	24.6	24.6	42.1	8.8	3						57.0 (8) This eliminates a great many students who could attend if work site adjustments were available. Should be a top priority.	57.0 (3)
57.1 Fund exemplary programs in area of task analysis.						33.3 N = 12	8.3	33.3	16.7	8.3		
57.2 Train staff in methods of scientific job/task analysis in curriculum development.						25.0 N = 12	33.3	16.7	16.7	8.3		
58.0 Lack of training programs for handicapped individuals in the emerging technology areas	19.0	25.9	41.4	13.8	2						58.0 (7) Vocational/technical counselors, teachers, advisors, and tutors are still looking at disabilities rather than abilities. There is a need for more places that will hire the handicapped.	58.0 (3)
58.1 Obtain funding to permit organization and implementation of such programs.						33.3 N = 12	8.3	41.7	8.3	8.3		
58.2 For a liaison with business.						33.3 N = 12	25.0	33.3	0	8.3		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
59.0 Limited variety of vocational/technical areas which accept handicapped students.	13.8	31.0	41.4	13.8	2						59.0 (7) Vocational/technical counselors, teachers, advisors, and tutors are still looking at disabilities rather than abilities. There is a need for more places that will hire the handicapped.	59.0 (6)
59.1 Provide pre and inservice education for faculty and administration to bring about attitudinal changes.						16.7 N = 12	50.0	16.7	8.3	8.3		
59.2 Expand electives and subject areas.						33.3 N = 12	25.0	33.3	0	8.3		
59.3 Identify "model" programs which community college administration and faculty can visit as an example.						41.7 N = 12	33.3	8.3	8.3	8.3		
60.0 A lack of specific entry level job criteria that a person with limited ability could accomplish and achieve in order to be employable.	21.4	33.9	33.9	10.7	4						60.0 (7) This is a very severe problem--coordination is needed between training programs and industry to determine minimum job entry level skills needed to be hired and then to train those with limited ability to fill this need.	60.0 (4)
60.1 Work closely with business to establish jobs that handicapped persons may do.						50.0 N =12	33.3	8.3	8.3	0		
60.2 Bring in consultants for technical assistance.						50.0 N = 12	8.3	16.7	16.7	8.3		
60.3 Develop a career ladder self-paced program.						41.7 N = 12	8.3	25.0	16.7	8.3		
61.0 Absence of a continuum of training skills for elementary through secondary education through vocational technical programs.	19.3	35.1	35.1	10.5	3						61.0 (8) The continuum of education training from elementary through post-secondary is fragmented at best.	61.0 (1)
61.1 Establish a sequential curriculum.						25.0 N = 12	50.0	0	16.7	8.3		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
61.2 Obtain legislative support to increase funding for more personnel and broader range of training opportunities at all levels.						16.7 N = 12	8.3	41.7	25.0	8.3		
62.0 Lack of exit points in the curriculum which allow the student to leave (with recognition) when the student has achieved to the highest level of his ability or employability.	8.6	29.3	43.1	19.0	2						62.0 (11) There is a need for more flexibility for entry and exit for students in vocational programs.	62.0 (3) This problem is being taken care of through flexible entry programs.
62.1 Establish new policies at The Texas Education Agency level.						33.3 N = 12	25.0	16.7	16.7	8.3		
62.2 Establish such point for all students and stop counting "completers" on reporting as seven year certificate or two year degree.						50.0 N = 12	8.3	8.3	25.0	8.3		
63.0 Lack of instructional materials and modifications to meet the needs of handicapped students.	22.8	40.4	28.1	8.8	3						63.0 (9) Much is available if it could be identified by and used by instructors--again, there is a need for training instructors. There is very little research and strategies available for instructors to meet handicapped students' needs.	63.0 (2)
63.1 Provide training for faculty to make necessary modifications in materials						33.3 N = 12	16.7	25.0	16.7	8.3		
63.2 Prepare and make available materials which will enable a student to learn either by seeing or hearing.						16.7 N = 12	33.3	33.3	0	16.7		
64.0 Lack of knowledge regarding adapting the classroom to the handicapped student, or the handicapped student to the classroom.	11.9	42.4	37.3	8.5	1							
64.1 Obtain a consultant to assist with adaptation.						27.3 N = 12	27.3	18.2	18.2	9.1		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
											RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
	1	2	3	4	NR	1	2	3	4	5		
64.2 Teach handicapped students to communicate their needs.						41.7 N = 11	33.3	25.0	0	0		
64.3 Provide inservice training.						25.0 N = 12	33.3	33.3	0	8.3		
64.4 Purchase limited adaptable equipment with financial aid available.						16.7 N = 12	33.3	33.3	8.3	8.3		
65.0 Lack of reasonable modification of general community college schedules, requirements and procedures.	3.4	20.7	65.5	10.3	2						65.0 (1) An easy obstacle to overcome, yet often overlooked--such functional problems could discourage students from even beginning.	65.0 (3)
65.1 Place a person in each community college who will promote more and better adapted programs for the disabled.						25.0 N = 12	8.3	41.7	16.7	8.3		
65.2 Establish an open entry/open exit program.						25.0 N = 12	41.7	25.0	0	8.3		
66.0 Lack of reasonable modification of classroom and laboratory.	10.2	25.4	50.8	13.6	1						66.0 (5) Example: typing tables wheelchairs can fit under. Necessary for proper accessibility.	66.0 (3)
66.1 Place a person in each community college who will promote more and better adapted programs for the disabled.						27.3 N = 11	9.1	45.5	9.1	9.1		
66.2 Involve vocational classes in construction of specialized equipment.						25.0 N = 12	25.0	33.3	8.3	8.3		
BARRIERS WITHIN THE HELPING SYSTEM												
Vocational Materials and Equipment												
67.0 Lack of adaptable equipment that will facilitate teaching the handicapped.	26.3	42.1	24.6	7.0	3						67.0 (5) Needs to be give a higher priority. Very severe with drafting students at present.	67.0 (3)
67.1 Establish a pool of adaptable equipment available to various teachers on request.						36.4 N = 11	54.5	9.1	0	0		
67.2 Secure funding for necessary additional equipment.						10.0 N = 10	60.0	30.0	0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
68.0 Lack of electronic communication devices to assist the handicapped in understanding, participating and communicating.	14.3	19.6	57.1	8.9	4						68.0 (2) There are a great number of devices available that have not been tapped due to lack of awareness.	68.0 (3)
68.1 Obtain funds, and promote research and development.						18.2 N = 11	54.5	18.2	9.1	0		
69.0 Lack of modified and adaptive equipment for drafting students.	10.9	25.5	50.9	12.7	5						69.0 (6) Funds are needed for adaptive equipment.	69.0 (3)
69.1 Obtain funds (excess cost funding), promote research and development.						30.0 N = 10	50.0	10.0	10.0	0		
70.0 Lack of special equipment such as special seating, materials, sound lighting, adaptation for wheelchairs.	15.5	37.9	36.2	10.3	2						70.0 (8) Additional funding is needed. For the most part equipment is available but money is not.	70.0 (2)
70.1 Obtain funds (excess cost funding), promote research and development.						27.3 N = 11	27.3	36.4	9.1	0		
70.2 Involve the community and vocational classes in construction or acquisition of equipment.						54.5 N = 11	27.3	18.2	0	0		
71.0 Lack of funds to provide for special expenses such as special equipment.	29.8	42.1	22.8	5.3							71.0 (11) Lack of funds must be the most significant of all problems. Lack of knowledge about funding is a problem for most.	71.0 (2)
71.1 Obtain funds (excess cost funding), promote research and development.						10.0 N = 10	60.0	20.0	10.0	0		
71.2 Initiate special adaptive devices with the individual rather than the institution.						30.0 N = 10	30.0	30.0	0	10.0		
71.3 Obtain more legislative support.						55.6 N = 9	11.1	22.2	0	11.1		
72.0 Difficulty in using independent learning center where cassette-tapes and slides are used for self-paced learning.	10.3	31.0	50.0	8.6	2						72.0 (6) This is a problem especially for the deaf. Lack of properly designed material for deaf students.	72.0 (4) Where such centers exist, there is much help available.
72.1 Hire work-study students to assist.						40.0 N = 10	30.0	20.0	10.0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents
72.2 Provide alternate learning activities.						50.0 N = 12	50.0	0	0	0		
73.0 Problems in working with dangerous power equipment, handling of heavy or difficult objects, and coping with difficult working conditions (i.e., wet floors) in vocational technical laboratories	19.6	16.1	46.4	17.9	4						73.0 (6)	73.0 (2) This whole are "it's too hard or dangerous for the handicap ped"--is exaggerated. aware instructors and counselors can block a individual from partic pating and gaining ski for employment with ed cation on adapting saf devices, the participation may be feasible.
73.1 Provide orientation for instructors						66.7 N = 9	11.1	22.2	0	0		
73.2 Change the program of the handicapped student who is obviously unsuited for the course.						55.6 N = 9	33.3	11.1	0	0		
74.0 Inappropriate design of classrooms, laboratories and equipment.	14.0	29.8	42.1	14.0	3						74.0 (8) Labs were not designed for the handicapped--especially wheelchairs	74.0 (2)
74.1 Secure funding for necessary additional equipment.						8.3 N = 12	25.0	58.3	8.3	0		
74.2 Make necessary adaptations.						33.3 N = 12	50.0	16.7	0	0		
75.0 Lack of specially designed tools, and equipment for handicapped students.	17.9	37.5	35.7	8.9	4						75.0 (10) There should be some manufacturing group that could be contracted with to design equipment on an individual basis. Need for a central resource center to check out equipment.	75.0 (1)
75.1 Research should be promoted in the area of specially designed tools and equipment.						40.0 N = 10	30.0	10.0	20.0	0		
75.2 Develop a system for vocational resources similar to the Texas Learning Resource Center (TEA) network to locate resources.						54.5	36.4	9.1	0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
											RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents
	1	2	3	4	NR	1	2	3	4	5		
76.0 Inadequate special lighting or magnifying and mechanical devices.	7.3	34.5	47.3	10.9	5						76.0 (6) Needed by visually impaired students to assist in education.	76.0 (4)
76.1 Obtain funds (excess cost funding), promote research and development.						10.0 N = 10	80.0	0	10.0	0		
77.0 Inadequately designed learning and work stations to accommodate the handicapped in vocational training courses.	10.9	38.2	38.2	12.7	5						77.0 (6) Physical barriers pose huge problems. There is a need for good models to adapt to existing facilities.	77.0 (3)
77.1 Obtain funding, promote research and development.						9.1 N = 11	54.5	18.2	18.2	0		
78.0 Lack of typing facilities available to students	12.1	12.1	51.7	24.1	2						78.0 (4) Some students just can't write. Typing could be a means of support if the person had the experience.	78.0 (3)
78.1 Provide a learning center.						61.5 N = 13	23.1	15.4	0	0		
78.2 Obtain funding.						25.0 N = 12	16.7	50.0	8.3	0		
79.0 Inadequate provision of instructional materials and equipment in appropriate media (i.e., special textbooks, tapes and other materials designed for use by the handicapped).	12.5	48.2	33.9	5.4	4						79.0 (7)	79.0 (1)
79.1 Obtain funding, promote research and development.						27.3 N = 11	18.2	45.5	9.1	0		
79.2 Develop a system for vocational resources similar to the Texas Learning Resource Center (TEA) network to locate resources.						54.5 N = 11	36.4	9.1	0	0		
80.0 Lack of tactile maps, brailler, optacons, enlargers, and talking books.	16.7	40.7	29.6	13.0	6						80.0 (7) These should be mandatory purchases since this represents eyesight.	80.0 (0)
80.1 Obtain these through resources which make them available.						80.0 N = 10	20.0	0	0	0		
81.0 Lack of special lighting for interpreters to use who work with deaf students during films.	9.4	26.4	45.3	18.9	7						81.0 (2) One piece of equipment can change this.	81.0 (4)

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATED BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATED BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Responde
81.1 Obtain funding (excess cost funding).						30.0 N = 10	50.0	10.0	10.0	0		
Research												
82.0 An unwillingness on the part of the academic community at the Administrative and Board level to aggressively research the needs of the handicapped in their district--low budget priority.	32.1	33.9	28.6	5.4	4						82.0 (8) Most administrative units are responding slowly. Local pressure is needed. Bring in advocacy and protective services (state bar, developmental disabilities) to tell board about 94-142, 504 and rights of the handicapped.	82.0 (3)
82.1 Apply for grants to colleges to fund research and need identification of disabled students.						25.0 N = 12	41.7	16.7	8.3	8.3		
82.2 Provide funded graduate level seminars and workshops with graduate credit to be conducted during working hours.						36.4 N = 11	36.4	9.1	0	18.2		
82.3 Conduct a needs assessment and present to the governing board.						58.3 N = 12	25.0	8.3	8.3	0		
83.0 Lack of research in area of employer needs	19.3	45.6	24.6	10.5	3						83.0 (13) Local job market study badly needed. Must know employer needs to design appropriate programs. Need for program specialist between industry and training program.	83.0 [illegible]
83.1 Apply to local civic groups for funding.						50.0 N = 1[illegible]	[illegible]	20.0	10.0	10.0		
83.2 Determine employment needs so training can be directed towards these areas.						50.0 N = 12	33.3	8.3	8.3	0		
83.3 Assign this responsibility to the Texas Rehabilitation Commission.						18.2 N = 11	36.4	36.4	9.1	0		
84.0 Inadequate learning technology: lack of learning aides and technology to accommodate specific impairments.	16.4	34.5	40.0	9.1	5						84.0 (6) Slavish addiction to the lecture form, even in technical/vocational areas which bars the use of new and needed technology. Need additional research.	84.0 [illegible]
84.1 Provide funds for adequate research.						14.3 N = [illegible]	42.9	28.6	14.3	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondent
84.2 Apply current research and technology (technology not lacking)						77.8 N = 9	22.0	0	0	0		
Counseling, placement and followup												
85.0 Lack of realistic counseling and goal setting	22.4	46.6	25.9	5.2	2						85.0 (7) There are too few trained counselors on campus. Adoption of career education model would help.	85.0 (2)
85.1 Provide training for counselors.						76.9 N = 13	7.7	15.4	0	0		
85.2 Secure specially trained counselors.						53.8 N = 13	30.8	15.4	0	0		
86.0 Lack of diagnostic, counselling, and health centers on the community college campus	13.8	37.9	36.2	12.1	2						86.0 (9) Need more funds and better trained counselors. Very expensive but very beneficial to the handicapped.	86.0 (2)
86.1 Employ and/or train appropriate personnel and monitor to see that services are provided.						53.8 N = 13	7.7	23.1	7.7	7.7		
86.2 Make administration aware of the laws.						69.2 N = 13	7.7	23.1	0	0		
87.0 Inadequate prevocational exploration background information, and exposure to the world of work.	29.8	38.6	26.3	5.3	3						87.0 (10) This should be a top priority area. More coordination is needed at all levels. Better state guidelines.	87.0 (3)
87.1 Provide adequate prevocational exploration, background information and exposure to the world of work at the high school level.						83.3 N = 12	8.3	8.3	0	0		
87.2 Provide for student vocational evaluation and counseling.						66.7 N = 12	25.0	8.3	0	0		
87.3 Provide more preservice training in universities regarding resources available to the handicapped.						72.7 N = 11	18.2	9.1	0	0		
88.0 Lack of adequate evaluation and diagnosis before making career decisions.	23.2	42.9	28.6	5.4	4						88.0 (11) Very few resources of this nature are available on the community college campus. Career decisions still a shot in the dark--although improving.	88.0 (2)

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Responden
88.1 Facilitate exchange of information among agencies and community colleges.						72.7 N = 11	18.2	9.1	0	0		
88.2 Provide counseling.						63.6 N = 11	36.4	0	0	0		
89.0 Inadequate counseling and guidance services to help handicapped students cope with the educational environment.	12.3	43.9	35.1	8.8	3						89.0 (10) Services of qualified counselors for the handicapped are lacking--too many politics are interfering and preventing hiring of personnel.	89.0 (2)
89.1 Provide training for counselors and secure specially trained counselors.						66.7 N = 12	16.7	16.7	0	0		
89.2 Increase number of counselors.						33.3 N = 12	25.0	33.3	8.3	0		
90.0 Inadequate definition of job entry level skills needed by the client to perform in selected careers	19.0	25.9	46.6	8.6	2						90.0 (11) Scientific job analysis is crucial to all technical vocational programs. Need for program specialists. Too few trained, knowledgeable counselors.	90.0 (3)
91.0 Inadequate training in job seeking and interviewing skills	17.2	41.4	37.9	3.4	2						91.0 (10) Again points to the need for providing trained and knowledgeable counselors.	91.0 (2)
91.1 Establish top priorities for rehabilitation services to provide ongoing support for handicapped students in early years of training and job experience.						58.3 N = 12	25.0	16.7	0	0		
92.0 Inappropriate placement of students in vocational areas to provide instructors with required number of students	10.3	17.2	41.4	31.0	2						92.0 (5) This does happen. Students are not given enough choice in areas of interest and are channeled into existing areas.	92.0 (4)
92.1 Be more concerned about quality of training rather than numbers.						83.3 N = 12	8.3	8.3	0	0		
93.0 Lack of trained counselors on campus to work with disabled students	17.2	44.8	29.3	8.6	2						93.0 (11) Without trained counselors colleges cannot serve the needs of the handicapped adequately. Need more funds.	93.0 (2)
93.1 Provide training for counselors and secure specially trained counselors.						58.3 N = 12	25.0	16.7	0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Responden
93.2 Encourage handicapped students to use counseling services.						83.3 N = 12	16.7	0	0	0		
94.0 Lack of individual counseling sessions for handicapped students	14.0	29.8	40.4	15.8	3						94.0 (7) Too often individual counseling occurs too late--it should be ongoing.	94.0 (4) A handicappe person can always get counseling if they wa it.
94.1 Provide regularly scheduled counseling sessions for handicapped students						54.5 N = 11	27.3	9.1	0	9.1		
94.2 Provide workshops to assist counselors.						60.0 N = 10	10.0	20.0	10.0	0		
95.0 Lack of adequate career and vocational information and job forecasts with respect to disabilities.	23.2	35.7	32.1	8.9	4						95.0 (9) Need more counselors for the handicapped	95.0 (2)
95.1 Develop a better system of dissemination of vocational and career information with job forecasts.						63.6 N = 11	18.2	18.2	0	0		
95.2 Develop a direction system for vocational resources similar to the Texas Learning Resource Center (TEA) network to locate all available resources.						45.5 N = 11	45.5	9.1	0	0		
95.3 Develop research in this area.						30.0 N = 10	30.0	30.0	10.0	0		
96.0 Inability of the counselor to communicate with deaf students.	26.3	28.1	29.8	15.8	3						96.0 (8) Deaf students' needs are just as important as any other students' needs. Need more qualified counselors.	96.0 (0)
96.1 Employ or train counselors who can communicate with deaf students						36.4 N = 11	27.3	27.3	9.1	0		
97.0 Inadequate support systems such as therapy groups to encourage attendance in school	15.5	27.6	41.4	15.5	2						97.0 (7) There is a need for ongoing therapy.	97.0 (4)
97.1 Train counselors to provide these services.						36.4 N = 11	36.4	0	18.2	9.1		
97.2 Provide a larger counseling staff.						18.2 N = 11	36.4	9.1	27.3	9.1		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATED BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATED BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents
98.0 Inadequate communication with instructor regarding varying degrees of handicapping conditions and the limitations involved.	15.3	37.3	42.4	5.1	1						98.0 (2)	98.0 (3)
98.1 Train counselors to communicate with instructors regarding handicapping conditions						61.5 N = 13	15.4	15.4	7.7	0		
98.2 Make a resource person, or consultant responsible.						46.2 N = 13	30.8	15.4	7.7	0		
99.0 Inadequate preparation for the psychological and physical demands of being a "worker"	20.7	36.2	31.0	12.1	2						99.0 (10) Many handicapped persons have been sheltered and must be so prepared.	99.0 (2)
99.1 Provide inservice training for counselors to prepare student to meet demands of being a "worker".						50.0 N = 12	8.3	33.3	8.3	0		
99.2 Provide regularly scheduled counseling sessions during the vocational training.						58.3 N = 12	25.0	8.3	8.3	0		
99.3 Increase emphasis on public school career education and vocational program development and opportunities for participation by handicapped students.						50.0 N = 12	33.3	16.7	0	0		
100.0 Vocational or occupational objectives are often selected without adequate awareness of the impact of the disability on the job.	22.4	34.5	34.5	8.6	2						100.0 (6) This is true in highly industrial areas. Vocational assessment is needed along with hands-on experiences. Need for careful planning with trained counselors.	100.0 (2)
100.1 Experienced counseling with a realistic approach should assist students in selecting vocational objectives.						33.3 N = 12	58.3	8.3	0	0		
101.0 Inadequate diagnostic and individual planning for adults with learning disabilities.	19.3	35.1	36.8	8.8	3						101.0 (7) A large part of the population could have a learning dysfunction. Very little of this can be done by staff on campus.	101.0 (3)

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents
101.1 Research and development of diagnostics for adults with learning disabilities should be conducted.						25.0 N = 12	25.0	33.3	8.3	8.3		
101.2 Assist in skill development techniques.						33.3 N = 12	33.3	33.3	0	0		
102.0 Inadequate training for handicapped persons in developing life long planning skills	19.3	28.1	49.1	3.5	3						102.0 (3) Institutions are lacking in this area for the total population, not just the handicapped.	102.0 (3)
103.0 Lack of contact with the home to keep the family aware of the student's adjustment and progress.	7.0	21.1	56.1	15.8	3						103.0 (2)	103.0 (6) Contact with home is not needed.
103.1 Place renewed emphasis on this barrier						33.3 N = 12	8.3	41.7	16.7	0		
104.0 Lack of support services of counseling, advising and self-help groups to provide coping and adaptive skills for school environment and work environments.	10.3	34.5	46.6	8.6	2						104.0 (7) Without these services it will be extremely difficult to achieve one's goal if one is severely disabled.	104.0 (3)
104.1 Create handicapped "clubs" for students where they can exchange ideas about coping.						50.0 N = 12	25.0	25.0	0	0		
104.2 Provide workshops to help counselors with this						41.7 N = 12	33.3	25.0	0	0		
105.0 Lack of recruitment of other handicapped students by successful handicapped students	10.3	22.4	44.8	22.4	2						105.0 (2) More emphasis should be placed on this type of recruitment.	105.0 (5)
105.1 Provide funds to develop such counseling services.						16.7 N = 12	16.7	50.0	0	16.7		
106.0 Counseling needed to direct students to appropriate programs, to explore qualifications for programs, to determine costs and scholarships available.	10.7	30.4	48.2	10.7	4						106.0 (6) This will eliminate alot of headaches if the student is counseled properly.	106.0 (2)

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Responde
106.1 Provide funds to develop such counseling services.						36.4 N = 11	9.1	36.4	9.1	9.1		
106.2 Develop a system for vocational resources similar to the Texas Learning Resource Center (TEA) to locate all available resources						54.5 N = 11	9.1	36.4	0	0		
Student Accounting System												
107.0 Lack of an adequate system of reporting students to Coordinating Board and TEA; current system does not identify handicapped students and in turn does not provide additional funds for provisions of special services.	26.8	26.8	32.1	14.3	4						107.0 (8) A system of reporting could be an effective tool in enhancing enrollment.	107.0 (2) Strongly disagree with approach. schools should work wi appropriate agencies (Texas Rehabilitation mission, Texas Commiss for the Blind, Texas Co mission for the Deaf, to access resources ava able. No system exists (although one is propos to identify handicapped students in a mainstrea setting.
107.1 Develop a method of accounting for students.						45.5 N = 11	45.5	9.1	0	0		
Lack of Financial Resources												
108.0 Lack of financial resources to pay living expenses, tuition, books, etc., and for expenses relating to the handicap itself.	25.5	34.5	32.7	7.3	5						108.0 (5) More staff need to get involved in this. Not enough is known about now to access agencies.	108.0 (1)
108.1 The Texas Rehabilitation Agency, Commission for the Blind and other state agencies need to be more liberal of acceptance of clients.						18.2 N = 11	36.4	36.4	0	9.1		
108.2 More legislative support is needed.						54.5 N = 11	18.2	18.2	0	9.1		
108.3 Make the need known to various organizations who might provide scholarships or needed grants.						27.3 N = 11	36.4	27.3	9.1	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
BARRIERS WITHIN SOCIETY												
Lack of Knowledge About The Helping System												
109.0 Lack of coordination and identification of community referral agencies.	18.2	38.2	40.0	3.6	5						109.0 (9) Better coordination would permit better programs. There is a need to publicize more.	109.0 (3)
109.1 Publish a directory for the area served by each community college.						41.7 N = 12	41.7	16.7	0	0		
109.2 Designate a particular on-campus counselor to have information available						58.3 N = 12	33.3	8.3	0	0		
110.0 Lack of awareness of improvements available through rehabilitation engineering by handicapped persons, their families, professors and rehabilitation personnel	9.1	30.9	52.7	7.3	5						110.0 (6) Severe because a barrier could be eliminated with such knowledge. Disagree with wording: should be a lack of services provided by TRC to work with all areas of handicapping conditions, also a lack of a human resource agency with knowledge of needs of families of the handicapped.	110.0 (2)
110.1 Distribution of publications by reserach and development agencies to consumers and consumer agencies.						33.3 N = 12	50.0	16.7	0	0		
111.0 Lack of coordination of services between the institution and the providers of social services to focus common resources on needs of the handicapped.	20.0	32.7	38.2	9.1	5						111.0 (8) Coordination should be a top priority.	111.0 (3)
111.1 Establish interagency committees.						20.0 N = 10	50.0	30.0	0	0		
111.2 Designate a liaison person and complement with community research component.						50.0 N = 10	20.0	30.0	0	0		
112.0 Lack of information available regarding the resources to assist the handicapped, i.e., transportation, medical, personal care, etc.	17.0	41.5	37.7	3.8	7						112.0 (6)	112.0 (1)

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
112.1 Establish interagency committees.						40.0 N = 10	30.0	30.0	0	0		
112.2 Provide transportation assistance.						18.2 N = 11	36.4	45.5	0	0		
Attitudinal Barriers												
113.0 Attitudinal barriers which would not allow a well trained student to function in industry	16.7	35.2	38.9	9.3	6						113.0 (9) Attitudinal barriers would definitely keep an individual from getting a job.	113.0 (3) Attitudinal barriers cannot be removed by a community college.
113.1 Establish an effective public awareness campaign.						63.6 N = 11	27.3	9.1	0	0		
114.0 Patronizing attitude on the part of society.	16.7	37.5	33.9	12.5	4						114.0 (3) Poor attitude towards the handicapped. There is a need for awareness and public education.	114.0 (3)
114.1 Provide more public relations information.						69.2 N = 13	15.4	7.7	0	7.7		
114.2 Provide preservice training in universities to change attitudes of educators.						61.5 N = 13	15.4	23.1	0	0		
115.0 Exclusion of handicapped students by non-handicapped individuals	10.5	22.8	49.1	17.5	3						115.0 (5) While no one would like to admit to this, it is probably more prevalent than we believe. Should be rated at least 2.00.	115.0 (4)
115.1 Provide more public information.						61.5 N = 13	23.1	0	15.4	0		
116.0 Indifference within society	12.5	32.1	48.2	7.1	4						116.0 (7) Changes do not occur unless awareness is experienced.	116.0 (4)
116.1 Provide more public information.						69.2 N = 13	15.4	0	15.4	0		
117.0 Employers or parents who would not allow handicapped students completing child development or child care courses to be responsible for children	17.0	28.3	41.5	13.2	7						117.0 (3)	117.0 (1)
117.1 Provide a well-timed effective public awareness campaign at federal, state, and local levels.						60.0 N = 10	20.0	10.0	10.0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
118.0 Negative attitudes toward the handicapped (includes parents of handicapped, teachers or professors, employers, and fellow workers)	10.5	42.1	38.6	8.8	3						118.0 (3)	118.0 (2)
118.1 Provide systematic education of the public through media						50.0 N = 12	33.3	8.3	8.3	0		
119.0 Inadequate expectations (dependency rather than independency is reinforced by society)	12.5	39.3	39.3	8.9	4						119.0 (10) There is a need for appropriate methods to foster independency without rejection.	119.0 (1) My experience has been that there is a high degree of unrealistic expectations--both too much or too little.
119.1 Provide for in preservice education and experience.						41.7 N = 12	16.7	41.7	0	0		
Inadequate Leadership												
120.0 Community served by Community College may not realize the need to serve adult handicapped, i.e., little or no pressure on the college to provide services.	19.0	31.0	41.4	8.6	2						120.0 (4) Without community expression of strong interest changes are difficult to achieve.	120.0 (2)
120.1 Utilize mass media to make community aware of the need for programs, create concern and interest in their well-being (such as Child Find)						66.7 N = 12	25.0	8.3	0	0		
Media Barriers												
121.0 Lack of public education on handicapping conditions	35.1	28.1	28.1	8.8	3						121.0 (10) More public education is needed here.	121.0 (2)
121.1 Provide public relations programs and information to the public.						66.7 N = 12	8.3	25.0	0	0		
121.2 Use case studies in public advertising to assist the disabled person, i.e., stories about the director of the Veterans Administration.						50.0 N = 12	25.0	25.0	0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
Transportation												
122.0 Lack of adequate transportation provisions to and from the community college and within it	32.8	27.6	31.0	8.6	2						122.0 (12) There is a big need for more buses, vans, or mini buses, to get to and from the community college. Important for deaf students. There can be nothing without transportation--but service must be excellent for handicapped students.	122.0 (3)
122.1 Secure necessary funds for transportation system.						41.7 N = 12	33.3	16.7	8.3	0		
122.2 Involve the community.						33.3 N = 12	58.3	8.3	0	0		
122.3 Should be addressed by a coordinated public transportation system which is accessible to the full spectrum of students with handicapping conditions. For each of the facilities mentioned to try to initiate its own transportation is very expensive and not usually cost effective. Helping System should be able to purchase transportation services from the accessible transportation.						66.7 N = 12	8.3	25.0	0	0		
123.0 Transportation to job training facility	24.6	28.1	36.8	10.5	3						123.0 (8) If you can't get to work you can't work and individual becomes more dependent on society.	123.0 (1)
123.1 Include transportation in excess costs for mainstreaming.						16.7 N = 12	41.7	33.3	8.3	0		
123.2 Conduct a needs assessment.						41.7 N = 12	25.0	16.7	8.3	0		
124.0 Transportation to employment.	23.2	32.1	33.9	10.7	4						124.0 (9) There is a need for public transportation.	124.0 (1)
124.1 Include transportation in excess costs for mainstreaming.						11.1 N = 9	44.4	33.3	11.1	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
Employment Barriers												
125.0 Unwillingness of employers in private business to provide personnel assistance (advocates) for the handicapped.	14.5	32.7	40.0	12.7	5						125.0 (3) There is little support from industry.	125.0 (4)
125.1 Conduct a sustained campaign of education of potential employers						33.3 N = 12	41.7	16.7	0	8.3		
125.2 Research should provide statistics to indicate that personnel assistance will help business.						33.3 N = 12	33.3	8.3	16.7	8.3		
126.0 Unwillingness of employers in private business to provide financial support for the handicapped.	15.1	28.3	37.7	18.9	7						126.0 (3)	126.0 (5) Employers should not be expected to subsidize any employee.
126.1 Provide tax credits for extra expenses employers encounter in training the handicapped.						30.0 N = 10	20.0	20.0	20.0	10.0		
127.0 Inability to earn money in part time employment while attending school	9.1	23.6	54.5	12.7	5						127.0 (6)	127.0 (3)
127.1 Plan with work study program and set up a job placement for handicapped.						36.4 N = 11	18.2	45.5	0	0		
127.2 Provide part time employment in the school system						45.5 N = 11	27.3	27.3	0	0		
128.0 Poor prospects of obtaining a job after completion of study.	11.1	38.9	40.7	9.3	6						128.0 (6) Results from little or unrealistic planning, career choice, etc., during initiation of services.	128.0 (2) Companies are trying to fill their quota.
128.1 These would be improved by careful selection of training program.						36.4 N = 11	45.5	18.2	0	0		
128.2 Establish top priorities for rehabilitation services to provide ongoing support for handicapped students in early years of training and job experience.						36.4 N = 11	45.5	18.2	0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
129.0 Stereotyping by society, i.e., "You have diabetes thus you're probably going to be a poorer worker", "You'll cause us to have to pay higher insurance", "You can't learn like the others", "I'll have to spend additional time with you".	32.7	32.7	29.1	5.5	5						129.0 (7) Need for public education. Vocational educators do not work with business people and the community to develop realistic expectations.	129.0 (2)
129.1 Provide public education regarding the capabilities of the handicapped.						58.3 N = 12	16.7	16.7	0	8.3		
130.0 Unwillingness of employers to hire the hearing impaired.	19.3	33.3	40.4	7.0	3						130.0 (3)	130.0 (3)
130.1 Provide public education regarding the capabilities of the deaf.						66.7 N = 12	16.7	8.3	8.3	0		
130.2 Change OSHA rules.						8.3 N =12	16.7	58.3	16.7	0		
131.0 Handicapped are routed into "low salary and low prestige" vocations	22.4	25.9	43.1	8.6	2						131.0 (4)	131.0 (2)
131.1 Provide career information to counselors and students.						46.2 N = 13	38.5	15.4	0	0		
132.0 Employers are unwilling to accept handicapped persons in their employ due to lack of sufficient information regarding handicapping conditions.	30.4	37.5	28.6	3.6	4						132.0 (9) Need for providing workshops to business and industry on these areas.	132.0 (5)
132.1 Conduct a public campaign regarding the abilities of the handicapped.						58.3 N = 12	25.0	0	16.7	0		
132.2 Provide employers information regarding the handicapping conditions						66.7 N = 12	25.0	8.3	0	0		
Architectural Barriers												
133.0 Architectural barriers which would not allow a well trained student to function in industry	28.1	36.8	29.8	5.3	3						133.0 (5) The problem is severe, but industry is changing to meet needs. Pressure and educational activities must be consistent.	133.0 (3)

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
133.1 Work with the City Planning Department as well as individual businesses.						41.7 N = 12	33.3	25.0	0	0		
133.2 Enforce current laws.						41.7 N = 12	33.3	25.0	0	0		
133.3 Give tax credits to remove barriers.						41.7 N = 12	8.3	33.3	0	16.7		
134.0 Buildings are inaccessible because they are not barrier free	24.6	42.1	29.8	3.5	3						134.0 (4) Federal law mandates	134.0 (4)
134.1 Funding should be obtained to assist with this problem.						33.3 N = 12	25.0	41.7	0	0		
134.2 Enforce current laws.						66.7 N = 12	25.0	8.3	0	0		
135.0 Housing designed to accommodate handicapped students.	21.1	43.9	24.6	10.5	3						135.0 (3) Funds are limited by HUD.	135.0 (3)
135.1 Funding should be obtained to assist with this problem.						16.7 N = 12	33.3	41.7	8.3	0		
Competing Demands												
136.0 Apprehension about competing with non-handicapped students for grades, job placement, etc., especially when performance is measured by subjective means as well as objective means.	12.7	34.5	43.6	9.1	5						136.0 (1) Human development courses address this problem and should be required by all handicapped students.	136.0 (3)
136.1 Teachers could assist by helping the handicapped to understand that they are competing only with themselves.						41.7 N = 12	16.7	33.3	8.3	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
BARRIERS WITHIN THE HANDICAPPED PERSON, THEIR FAMILIES AND OTHER ADVOCATES												
Handicapped Persons: Physical/ Mental/Emotional Problems												
137.0 Physical conditions which require medication for control pf pain resulting in poor attendance	3.6	32.1	50.0	14.3	4						137.0 (1)	137.0 (5)
137.1 Careful planning of the class schedule should be done, so that the student can take advantage of the time when they are not sedated.						37.5 N = 16	37.5	18.8	0	6.3		
137.2 Make instructors aware of this.						62.5 N = 16	6.3	31.3	0	0		
137.3 Develop a home bound program.						37.5 N = 16	12.5	25.0	18.8	6.3		
138.0 Lack of physical dexterity to manipulate mechanical devices	7.0	35.1	45.6	12.3	3						138.0 (4)	138.0 (3) Not a problem if counseled properly.
138.1 Develop assist apparatus.						18.8 N = 16	18.8	50.0	6.3	6.3		
138.2 Place a student in a program where he will not have to cope with the problem.						43.8 N = 16	18.8	31.3	6.3	0		
139.0 Inadequate mobility skills to cope successfully with job related travel	10.5	35.1	45.6	8.8	3						139.0 (1)	139.0 (2)
139.1 Develop assist apparatus.						25.0 N = 16	25.0	37.5	6.3	6.3		
139.2 Provide more and better transit systems						12.5 N = 16	43.8	37.5	6.3	0		
140.0 Inadequate motor skills to perform in vocational technical programs	14.0	31.6	38.6	15.8	3						140.0 (5)	140.0 (1)
140.1 Develop assist apparatus.						18.8 N = 16	25.0	43.8	12.5	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respond
140.2 Select a program or field where he can perform						62.5	18.8	6.3	12.5	0 N = 16		
141.0 Hearing impairments which make some types of employment dangerous for the handicapped individual	10.9	30.9	41.8	16.4	5						141.0 (4)	141.0 (4) This is not basic problem--the r problem is accepting hearing impaired int certain technical ar
141.1 Do not put a hearing impaired person in such an environment.						62.5	18.8	18.8	0	0 N = 16		
142.0 Difficulty in communicating by writing due to a disability.	8.8	38.6	43.9	8.8	3						142.0 (3) Very severe particularly where the handicapping condition is not apparent.	142.0 (3)
142.1 Obtain a support person or a student helper.						43.8	31.3	18.8	6.3	0 N = 16		
142.2 Develop assist apparatus.						25.0	43.8	25.0	6.3	0 N = 16		
142.3 Develop other means of communication if another method is acceptable.						56.3	31.3	12.5	0	0 N = 16		
143.0 Diseases requiring periodic hospitalization interfere with attendance	8.8	35.1	47.4	8.8	3						143.0 (4)	143.0 (2)
143.1 Provide programs of independent instruction						43.8	43.8	12.5	0	0 N = 16		
143.2 Provide good counseling services.						56.3	31.3	6.3	0	6.3 N = 16		
144.0 Lack of physical strength to teach or work with young children	5.4	14.3	51.8	28.6	4						144.0 (2)	144.0 (3)
145.0 Loss of use of dominant arm requires retraining and causes the person to work slowly	3.6	26.8	53.6	16.1	4						145.0 (5)	145.0 (2)
145.1 Schedule training at a slower rate						37.5	25.0	37.5	0	0 N = 16		
146.0 Physical conditions which impede vocational technical education	10.9	32.7	45.5	10.9	5						146.0 (2)	146.0 (2)
146.1 Select a vocation in which the disability has less impact.						40.0	46.7	13.3	0	0 N = 15		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
147.0 Inadequate communication skills	9.3	31.5	46.3	13.0	6						147.0 (6) There is a need for more interpreters and student assistants	147.0 (3) Easily remedied through special classes.
147.1 Provide developmental courses for students						64.3 N = 14	21.4	7.1	7.1	0		
148.0 Difficulty in listening to verbal presentations and taking notes simultaneously	8.9	37.5	46.4	7.1	4						148.0 (6) There is a need for funds for interpreters, student assistants and tape recorders.	148.0 (3)
148.1 Provide tape recorders to these students.						73.3 N = 15	26.7	0	0	0		
149.0 Communication problems concerned with receptive and expressive abilities	14.3	28.6	44.6	12.5	4						149.0 (6) The student will continue to fail if not recognized and remedied.	149.0 (1)
149.1 Provide special courses for students with these problems.						20.0 N = 15	26.7	46.7	6.7	0		
150.0 Communication difficulties: watching the interpreter, taking notes and observing the blackboard simultaneously	16.1	35.7	37.5	10.7	4						150.0 (6) There is a need to have more support services and better material for the deaf.	150.0 (1)
150.1 Provide special courses for students with these problems.						6.3 N = 16	18.8	37.5	18.8	18.8		
150.2 Educators need to understand that these persons are not in the class for grades, but to learn what they can.						6.3 N = 16	31.3	18.8	25.0	18.3		
150.3 Provide special teachers and small classes						31.3 N = 16	18.8	31.3	6.3	12.5		
151.0 Difficulty in paying attention.	12.5	12.5	53.6	21.4	4						151.0 (5) Mental and emotional states plus effects of constant pain interfere significantly with learning.	151.0 (4)
151.1 Instructor should talk slower and to the point.						6.3 N = 16	31.3	25.0	18.8	18.8		
152.0 Cariovascular conditions which produce insufficient blood supplies to the brain, causing poor memory, poor concentration and blurred vision.	10.7	28.6	37.5	23.2	4						152.0 (1)	152.0 (2)

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
152.1 Try to alleviate these before training begins.						31.3 N = 16	31.3	31.3	6.3	0		
153.0 Physical conditions which require medication for control of pain result in dulled mental faculties.	16.1	23.2	42.9	17.9	4						153.0 (2)	153.0 (2)
153.1 Schedule classes for times of optimum functioning.						25.0 N = 16	56.3	12.5	0	6.3		
153.2 Provide homebound programs and support personnel.						25.0 N = 16	31.3	43.8	0	0		
153.3 Make nurses available on campus.						20.0 N = 15	33.3	26.7	13.3	6.7		
154.0 Inability to accept the discipline and pressure associated with technical programs.	10.9	25.5	49.1	14.5	5						154.0 (6) This is more severe for some disabling conditions.	154.0 (2)
154.1 Provide readily available counseling to ease frustration.						18.8 N = 16	62.5	6.3	6.3	6.3		
155.0 Lack of ability to adhere to stringent time schedules.	12.5	17.9	53.6	16.1	4						155.0 (2)	155.0 (3) Adjustments can be developed to correct this situation.
155.1 Select a type of training which will allow for this.						18.8 N = 16	50.0	18.8	12.5	0		
155.2 Allow for more flexibility in schedules.						12.5 N = 16	37.5	31.3	12.5	6.3		
156.0 Inability to concentrate on the lecture when verbal material is being presented.	10.9	21.8	49.1	18.2	5						156.0 (1)	156.0 (3)
156.1 Provide special coaching on listening techniques.						31.3 N = 16	43.8	16.8	6.3	0		
156.2 Provide support personnel (note takers) tutors						46.7 N = 15	33.3	13.3	6.7	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents
157.0 Lack of emotional stability	10.7	30.4	42.9	16.1	4						157.0 (4) May be caused by failure to accept limitations or disability and results in starting many training programs but finishing none. Very common problem among veterans with various disabilities.	157.0 (3)
157.1 Provide regular counseling.						37.5 N = 16	50.0	12.5	0	0		
158.0 Inability to adapt to the discipline of the classroom due to mental illness	12.7	36.4	30.9	20.0	5						158.0 (3) Mental illness doesn't belong in college.	158.0 (4) Human development courses can correct this situation.
158.1 Provide regular counseling.						50.0 N = 16	18.8	12.5	12.5	6.3		
159.0 Slowed responses and poor concentration caused by medication taken for mental illness which often results in insulation from reality.	14.5	34.5	32.7	18.2	5						159.0 (3) Some clients may not be ready for college and shouldn't be there as the problem is severe.	159.0 (4)
159.1 Obtain medical advice						31.3 N = 16	31.3	25.0	0	12.5		
Handicapped persons: Lack of Knowledge												
160.0 Inability to handle post-secondary academics	14.5	27.3	40.0	18.2	5						160.0 (6) Better secondary schooling is needed. Post-secondary academics are not the appropriate channel for the student.	160.0 (4)
160.1 Provide remedial education and/or special tutors.						33.3 N = 15	46.7	13.3	6.7	0		
160.2 Do not provide for social promotion.						53.8 N = 13	15.4	15.4	0	15.4		
161.0 Inadequate development of basic skill level	18.2	40.0	30.9	10.9	5						161.0 (5)	161.0 (3)
161.1 Provide special tutors and/or remedial education.						40.0 N = 15	40.0	20.0	0	0		
161.2 Increase emphasis on public school career education and vocational program development and opportunities for participation by handicapped students.						46.2 N = 13	46.2	7.7	0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
162.0 Inability to cope with complex written material, charts and graphs	11.1	29.6	44.4	14.8	6						162.0 (2)	162.0 (5)
162.1 Conduct a more careful evaluation before selecting the training program.						62.5 N = 16	37.5	0	0	0		
162.2 Individualize instruction.						25.0 N = 16	18.8	50.0	6.3	0		
163.0 Lack of understanding of technical vocabulary on which concepts are built.	9.3	24.1	50.0	16.7	6						163.0 (7) (For deaf). Usually the deaf have a very limited vocabulary.	163.0 (5)
163.1 Develop reading (subject oriented) classes.						26.7 N = 15	46.7	20.0	6.7	0		
163.2 Have faculty/staff prepare necessary materials.						26.7 N = 15	33.3	33.3	6.7	0		
164.0 Failure to realistically assess limitations and potentials	17.0	35.8	41.5	5.7	7						164.0 (5) There is a need for more specialized counseling.	164.0 (4)
164.1 Provide more comprehensive counseling						73.3 N = 15	20.0	6.7	0	0		
164.2 Provide reality counseling						66.7 N = 15	33.3	0	0	0		
164.3 Students should be encouraged to overcome limitations--they have potentials they are not aware of.						33.3 N = 15	46.7	13.3	6.7	0		
165.0 A lack of perception and knowledge of everyday surroundings due to living in a sheltered environment.	14.5	41.8	40.0	3.6	5						165.0 (3) There is a need to make use of the adult performance level program (APL).	165.0 (3)
165.1 Provide initial orientation sessions prior to community college enrollment.						87.5 N = 16	6.3	6.3	0	0		
165.2 Do not give more assistance than is absolutely required. Force handicapped to work to his/her maximum potential.						25.0 N = 16	25.0	31.3	12.5	6.3		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIG (Numbers of Respon
166.0 Inability to transfer learning to application in order to perform in vocational technical programs.	7.4	14.8	57.4	20.4	6						166.0 (2)	166.0 (4)
166.1 Provide for controlled exposure to the "outside world".						31.3 N = 16	43.8	12.5	12.5	0		
167.0 Lack of knowledge of slang terms by deaf students.	11.8	7.8	56.9	23.5	9						167.0 (3)	167.0 (6) Not import
167.1 Special instruction should be provided that will help student adapt.						38.5 N = 13	38.5	15.4	7.7	0		
168.0 Inadequate knowledge of life skills	10.9	30.9	47.3	10.9	5						168.0 (5) The handicapped (as well as all students) have a need for life long living skills.	168.0 (5)
168.1 Provide counseling services.						50.0 N = 16	25.0	25.0	0	0		
168.2 Involve the student's family.						31.3 N = 16	37.5	31.3	0	0		
169.0 Inability to develop feasible goals	12.7	25.5	56.4	5.5	5						169.0 (3) Many training failures are due to selecting inappropriate objectives.	169.0 (4)
169.1 Provide reality counseling.						50.0 N = 16	37.5	12.5	0	[illegible]		
Handicapped Persons: Behavioral Barriers												
170.0 Poor home or institutional training for students in areas of initiative, tact, and sharing of responsibility.	13.0	42.6	38.9	5.6	6						170.0 (5) The student is not prepared for daily living much less academic demands if he does not have this background.	170.0 (3)
170.1 Provide adequate counseling.						37.5 N = 16	43.8	12.5	6.3	0		
171.0 Inadequate knowledge of social behavior, and appropriate (behavioral) skills to perform on a job	10.9	41.8	38.2	9.1	5						171.0 (5) The student is not prepared for daily living much less academic demands if he does not have this background.	171.0 (4)
171.1 Group counseling and teaching.						56.3 N = 16	31.3	12.5	0	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 50)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
171.2 Establish top priorities for rehabilitation services to provioe ongoing support for handicapped students in early years of training and job experience.						37.5 N = 16	43.8	18.8	0	0		
172.0 Inability to adjust towards the life style in a college setting.	5.5	25.5	56.4	12.7	5						172.0 (2) There is a need to ameliorate these problems to admission in regular programs.	172.0 (5)
173.0 Behavior problems due to mental or emotaional impairments which disrupt classes and keep the student from learning.	12.7	30.9	38.2	18.2	5						173.0 (3) Student should not be in college until he has acquired skills for daily living, or has been through a counseling program to learn strategies for solving specific problems.	173.0 (3)
173.1 These should be resolved or minimized before training begins.						25.0 N = 16	43.8	25.0	6.3	0		
173.2 Provide behavioral therapy.						37.5 N = 16	43.8	12.5	6.3	0		
174.0 Inability to manage personal affairs in order to concentrate on learning experience	9.3	29.6	48.1	13.0	6						174.0 (3) Life long living skills are essential.	174.0 (4)
174.1 Provide opportunity to develop skills tnrough counseling.						46.7 N = 15	33.3	13.3	6.7	0		
175.0 Lack of internal orientation	16.7	23.3	53.3	6.7	30						175.0 (3) Essential for severely disabled (especially) and needed by total population.	175.0 (4)
Negative Attitudes and Feelings												
176.0 Poor self concept, low frustration level, making the academic environment more difficult than it actually is.	15.1	39.6	43.4	1.9	7						176.0 (4) Severely handicapped need this adjustment factor. Achieving a positive self concept is frequently discussed and seldom accomplished	176.0 (3)
176.1 Develop programmed short term goals and positive feedback.						56.3 N = 16	25.0	18.8	0	0		
176.2 Establish needed support systems for handicapped students in all settings.						31.3 N = 14	50.0	12.5	0	6.3		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
											RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents
	1	2	3	4	NR	1	2	3	4	5		
176.3 Provide more one on one counseling and instruction.						50.0 N = 14	21.4	14.3	7.1	7.1		
177.0 Poor self image leading to the belief that with a disability the client/student cannot compete with others or get a job even if he finishes training.	20.4	42.6	35.2	1.9	6						177.0 (5)	177.0 (3)
177.1 Provide special counseling/assistance.						50.0 N = 14	35.7	14.3	0	0		
177.2 Have students come back to school and talk to the disability student, let them tell others what to expect.						37.5 N = 16	43.8	12.5	6.3	0		
178.0 Poor self concept in the area of interpersonal relations	11.1	42.6	44.4	1.9	6						178.0 (4)	178.0 (3)
178.1 Provide group counseling						60.0 N = 15	26.7	13.3	0	0		
178.2 Provide opportunities for social interaction						53.3 N = 15	26.7	20.0	0	0		
178.3 Establish needed support systems for handicapped students in all settings.						40.0 N = 15	26.7	20.0	6.7	6.7		
179.0 Overly independent attitude, i.e., the student refuses all help and aids.	7.4	11.1	59.3	22.2	6						179.0 (1)	179.0 (4)
179.1 Provide therapy for the student.						21.4 N = 14	42.9	28.6	0	7.1		
180.0 The use of a disability as an excuse for failure or demand for special treatment "the world owes me a living" attitude	13.0	27.8	44.4	14.8	6						180.0 (5) Especially common among Vietnam veterans. Student needs to be in control of self and feelings.	180.0 (3)
180.1 Provide long-term therapy						31.3 N = 16	31.3	12.5	6.3	18.8		
180.2 Do not give more assistance than is required; force the student to work to his/her maximum potential.						20.0 N = 15	46.7	13.3	13.3	6.7		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
181.0 Personal feelings of inadequacy and lack of self worth	13.2	39.6	41.5	5.7	7						181.0 (5)	181.0 (3)
181.1 Provide counseling in groups						46.7 N = 15	53.3	0	0	0		
181.2 Provide programmed learning experiences						28.6 N = 14	35.7	21.4	14.3	0		
181.3 Establish needed support systems for handicapped students in all settings.						26.7 N = 15	60.0	6.7	0	6.7		
182.0 Belief that one is being discriminated against due to the handicap	5.6	33.3	51.9	9.3	6						182.0 (3)	182.0 (4)
182.1 Provide counseling						40.0 N = 15	53.3	6.7	0	0		
183.0 Lack of aggression in demanding appropriate instruction	11.1	31.5	38.9	18.5	6						183.0 (5)	183.0 (3)
183.1 Provide group counseling						33.3 N = 15	60.0	6.7	0	0		
184.0 Anxiety caused by a limited educational background in persons who have not attended school for many years	15.1	28.3	49.1	7.5	7						184.0 (8) This is especially true for retired military.	184.0 (2)
184.1 Begin training at a slow rate to insure success and provide psychological support.						53.3 N = 15	26.7	13.3	6.7	0		
185.0 Fear that a handicap will be detrimental in employment which requires short term contact with the public (example: sales) versus a long term sustained relationship with fewer people.	9.6	19.2	51.9	19.2	8						185.0 (3)	185.0 (3) Personal barriers must [illegible] removed by the individual, not society. Very individual--some handicapped individuals like public contact.
186.0 Lack of self esteem and a positive "can do/will do" attitude	18.5	31.5	42.6	7.4	6						186.0 (8)	186.0 (3)
186.1 Provide special counseling and assistance						50.0 N = 14	35.7	7.1	7.1	0		
187.0 Lack of self assurance and assertiveness	25.5	25.5	45.5	3.6	5						187.0 (8) Need the knowledge they are not competing with anyone else.	187.0 (3)

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents
187.1 Provide special counseling and assistance						50.0 N = 14	42.9	7.1	0	0		
188.0 Loss of hearing which is often accompanied by paranoid behavior and/or withdrawal resulting in little or no classroom participation and poor attendance	13.5	26.9	42.3	17.3	8						188.0 (4)	188.0 (6)
188.1 Provide special counseling and assistance						50.0 N = 14	35.7	7.1	7.1	0		
189.0 Inability to compete on all levels without special assistance in order to overcome feelings of inadequacy and the emotional problems and frustrations that their special problems cause	11.5	26.9	50.0	11.5	8						189.0 (4)	189.0 (3)
190.0 Family members who provide more assistance than is needed for self improvement	14.8	37.0	35.2	13.0	6						190.0 (4) There is a lack of knowledge in overprotection. Student needs self reliance which can be gained through rational behavior training and assertiveness to deal with over-bearing parents.	190.0 (3)
190.1 Administrators and instructors can work with families to overcome these barriers.						7.1 N = 14	50.0	21.4	21.4	0		
190.2 Provide counseling and education for the family						16.7 N = 12	33.3	33.3	16.7	0		
191.0 Lack of support and encouragement from the family	17.0	22.6	47.2	13.2	7						191.0 (3)	191.0 (4)
191.1 Provide family counseling						28.6 N = 14	35.7	28.6	7.1	0		
191.2 Separate the student from the family						7.7 N = 13	30.8	15.4	15.4	30.8		
192.0 A home environment which discourages or destroys interest or initiative on the part of the student.	23.1	28.8	40.4	7.7	8						192.0 (7) Human Resources Agency, TDMH-MR Community Services still do not recognize the importance of supporting the family with other assistance other than welfare money.	192.0 (4)

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
											RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respondents)
	1	2	3	4	NR	1	2	3	4	5		
192.1 Family counseling and/or removal of the student to a support environment should be implemented.						14.3 N = 14	42.9	28.6	7.1	7.1		
193.0 Family members who adhere to myths and misconceptions of handicapping conditions	20.8	28.3	39.6	11.3	7						193.0 (2) There should be required courses for parents. Well-meaning over protection results from lack of knowledge.	193.0 (5)
193.1 Provide for family counseling						28.6 N = 14	35.7	28.6	0	7.1		
194.0 Lack of emotional support from significant "others" in social life of the handicapped, i.e., need for sustained encouragement	15.4	40.4	36.5	7.7	8						194.0 (2) On-going support should be provided by rehabilitation counselors and peer counselors on the campus.	194.0 (3)
194.1 Use of halfway houses						14.3 N = 14	42.9	14.3	7.1	21.4		
194.2 Provide counseling on a regularly scheduled basis.						35.7 N = 14	35.7	28.6	0	0		
195.0 Some disabled people also have disabled spouses which put an additional burden on the person.	5.5	20.0	45.5	29.1	5						195.0 (1)	195.0 (4)
Barriers within Advocates for Handicapped Persons												
196.0 Lack of public, administrative, and parental support to encourage handicapped persons to attend technical programs.	15.8	29.8	47.4	7.0	3						196.0 (5) This is a big key and a major barrier--publicity and legislation is needed. The open door must be swung wider and the welcome mat put down.	196.0 (2)
196.1 Offer a course in Secondary and Post-Secondary schools (for credit) on the subject of "Acceptance of and Victory Over Handicaps". Let all interested students take the course.						26.7 N = 15	33.3	40.0	0	0		
196.2 Provide for family involvement and training.						20.0 N = 15	33.3	40.0	6.7	0		

Table IV - Continued

BARRIERS AND RECOMMENDATIONS	SEVERITY OF BARRIER RATING BY PERCENTAGE (N = 60)					FEASIBILITY OF IMPLEMENTATION RATING BY PERCENTAGE					COMMENTS REGARDING RATING OF SEVERITY OF BARRIERS	
	1	2	3	4	NR	1	2	3	4	5	RATED TOO LOW (Numbers of Respondents)	RATED TOO HIGH (Numbers of Respond
197.0 Inadequate assistance and support which results in fear of entering the world of training and the world of work.	12.3	47.4	36.8	3.5	3						197.0 (2) This is a realistic fear which can be eliminated through counseling and Human Development courses.	197.0 (2)
197.1 Provide emotional support through counseling and other students.						37.5 N = 16	50.0	12.5	0	0		
197.2 Establish top priorities for rehabilitation services to provide support for handicapped students in early years of training and job experience.						28.6 N = 14	35.7	35.7	0	0		
198.0 Goals which are established by peers and society rather than the individual	27.6	27.6	37.9	6.9	2						198.0 (7) Peers have an unusual influence on an individual's decision-making for life.	198.0 (2)
198.1 Provide student directed counseling						53.3 N = 15	33.3	13.3	0	0		
198.2 Public and private agencies should make more effort to educate the general public.						62.5 N = 8	37.5	0	0	0		

Analyses of Participants' Responses of Severity of Barriers

Information was requested from the participants regarding their employment roles and handicapping conditions so that the ratings could be analyzed in light of these responses. For the 72 participants, nine classifications according to employment roles were made:

Employment Role	Numbers of Participants
Handicapped Student	2
Teacher/Instructor	20
Teacher Trainer	2
Agency or Organization Administrator	7
Counselor	14
Community College Administrator	11
Agency Consultant	9
Transportation/handicapped	2
Other	5
Total	72

The five participants in the category of "other" were a representative of the college coordinating board, a clinical psychologist, a research psychologist, a public school administrator, and a vocational adjustment coordinator.

For the 72 participants, six classifications according to handicapping conditions were made:

Handicapping Condition	Numbers of Participants
Orthopedic	11
Deaf/hearing impaired	4
Sight impaired	2
Respiratory	1
Blind	1
No handicapping condition	53
Total	72

Eleven barriers rated by participants as most severe (ratings of very severe or moderately severe) were analyzed by participants' employment roles and handicapping conditions. Only 60 of the 72 participants rated barriers according to their severity, therefore the tables represent responses of these 60 participants only.

The eleven barriers which received the highest percentage of ratings of very severe or moderately severe by the 60 respondents, by position, are presented in Table V. The first column indicates the barrier number, the second column the barrier, the third column the numbers of responses for each item, and the fourth column the percent of participants who rated the barrier very severe or moderately severe. In the last nine columns are codes for the nine positions of the participants, giving the percentage of the total group and the percentage of the position group in parentheses.

TABLE V

ELEVEN BARRIERS WITH HIGHEST PERCENTAGES RATED VERY SEVERE OR MODERATELY SEVERE

BY PARTICIPANT BY POSITION

Key to position (numbers of participants in each position) N = 60

1 - Handicapped Student (2)	4 - Administrator of Agency (5)	7 - Agency Consultant (8)
2 - Teacher or Instructor (19)	5 - Counselor (12)	8 - Transportation (2)
3 - Teacher Trainer (2)	6 - Administrator of Higher Education (7)	9 - Other (3)

Barrier Number	Barrier	Responses		Percent of Total Group (Percent of Position Group)								
		Number	Percent	1	2	3	4	5	6	7	8	9
30	Lack of programs to prepare post-secondary instructors to teach the handicapped	59	78.0	1.7 (50)	25.6 (84.2)	3.4 (100)	3.4 (40)	17.0 (63.4)	10.2 (73.1)	11.9 (65.9)	0	5.1 (100)
28	Inadequate training and information in provided to teachers regarding psychological aspects, and learning difficulties of specific handicapping conditions	60	73.3	1.7 (50)	23.3 (73.7)	1.7 (50)	6.6 (80)	15.0 (75)	11.7 (100)	8.3 (62.5)	0	5.0 (100)
34	Lack of counseling and taeching skills needed to acommodate the handicapped student's uniqueness	59	72.9	3.4 (100)	22.1 (73.7)	1.7 (50)	5.1 (60)	15.3 (75)	10.2 (85.7)	10.2 (75.0)	0	5.1 (100)
24	Lack of general knowledge of the handicapped and handicapping conditions (instructors)	59	72.8	0	22.1 (73.7)	1.7 (50)	8.5 (100)	15.3 (75.0)	10.2 (85.7)	10.2 (75.0)	0	5.1 (100)
71	Lack of funds to provide for special expenses such as special equipment	57	71.9	3.5 (100)	17.8 (68.4)	3.6 (100)	5.3 (60)	14.0 (66.6)	10.5 (85.7)	7.0 (57.1)	1.8 (50)	5.3 (100)
31	Instructors inadequately trained in techniques to assist the handicapped student to adapt standard procedures to meet his requirements	60	71.7	1.7 (50)	28.4 (89.4)	1.7 (50)	3.3 (40)	13.3 (66.6)	10.0 (85.7)	10.0 (75)	0	3.4 (66.6)
27	Inadequate staff preparation and orientation toward working with handicapped students in the area of various learning modalities	60	71.7	1.7 (50)	23.4 (73.6)	3.4 (100)	5.0 (60)	15.0 (75)	10.0 (85.7)	8.3 (62.5)	0	5.0 (100)
15	Lack of knowledge of what students can do resulting in negative attitudes toward the limitations of the handicapped student	59	71.2	1.7 (50)	20.4 (63.4)	1.7 (50)	6.8 (80)	13.6 (66.7)	11.9 (100)	6.8 (57.2)	3.4 (100)	5.1 (100)
85	Lack of realistic counseling and goal setting	58	69.0	1.7 (50)	19.0 (68.4)	3.4	5.1 (60)	15.5 (60)	8.6 (75)	10.4 (75)	0	5.1 (100)
87	Inadequate prevocational exploration background information, and exposure to the world of work	57	68.4	0	21.2 (73.7)	0 (0)	5.3 (60)	17.6 (83.3)	8.8 (71.4)	10.5 (75)	0	5.3 (100)
67	Lack of adequate equipment that will facilitate teaching the handicapped	57	68.4	1.8 (50)	21.2 (73.7)	3.4 (100)	5.3 (60)	10.6 (54.6)	8.8 (71.4)	10.5 (85.7)	1.8 (50)	5.3 (100)

Findings presented in Table V indicate that both students found barriers 34 and 71 severe. Seventy percent or more of the teachers in the group found all the barriers except 71 and 15 severe. Both participants who were teacher trainers indicated that barriers 30, 71, 27, 85 and 67 were severe. Eighty percent or more of the administrators felt that barriers 28, 24, and 15 were severe. Barriers 28, 34, 24, 27, and 87 were selected by seventy-five percent or more of the counselors as severe. Seventy-five percent of agency consultants selected barriers 34, 24, 31, 35, 87, and 67 as severe. The two persons engaged in transportation of the handicapped selected only barrier 15 as severe, and all three of the participants in the "other" category selected all but barrier 31 as being severe.

The eleven barriers which received the highest percentages of ratings of very severe or moderately severe by the 60 respondents by handicapping conditions, are presented in Table VI. The first column indicates the barrier number, the second column the barrier, the third column the number of responses for each item, and the fourth column the percent of participants who rated the barrier very severe or moderately severe. In the last six columns are codes for the six handicapping conditions of the respondents, giving the percentage of the position group in parentheses.

Only one barrier (15) in Table VI was rated most severe (very severe or moderately severe) by 70% or more of the participants with an orthopedic handicap. Four barriers, 24, 31, 67, and 87 were rated by all participants with impaired hearing as being most severe. There was

Table VI

ELEVEN BARRIERS WITH HIGHEST PERCENTAGES RATED VERY SEVERE OR MODERATELY SEVERE BY PARTICIPANT BY HANDICAPPING CONDITION

Key to handicapping condition (numbers of participants with handicap) N = 60

1 - Orthopedic (10)	4 - Respiratory (1)
2 - Hearing Impaired (3)	5 - Blind (1)
3 - Sight Impaired (1)	6 - No handicapping condition (44)

Barrier Number	Barrier	Responses		Percent of Total Group (Percent of Group Identified by Handicap)					
		Number	Percent	1	2	3	4	5	6
30	Lack of programs to prepare post-secondary instructors to teach the handicapped	59	78.0	10.2 (60.0)	3.4 (66.6)	1.7 (100)	1.7 (100)	1.7 (100)	59.3 (79.5)
28	Inadequate training and information is provided to teachers regarding psychological aspects, and learning difficulties of specific handicapping conditions	50	73.3	10.2 (60.0)	3.3 (66.6)	1.7 (100)	1.7 (100)	1.7 (100)	55.0 (75.0)
34	Lack of counseling and teaching skills needed to accommodate the handicapped student's uniqueness	59	72.9	10.5 (60.0)	3.4 (66.6)	1.7 (100)	1.7 (100)	1.7 (100)	54.3 (72.7)
24	Lack of general knowledge of the handicapped and handicapping conditions (instructors)	59	72.8	6.8 (40.0)	5.1 (100)	1.7 (100)	0	1.7 (100)	57.6 (79.1)
71	Lack of funds to provide for special expenses such as special equipment	57	71.9	10.6 (60.0	1.8 (33.3)	1.8 (100)	0	1.8 (100)	56.1 (66.2)
27	Inadequate staff preparation and orientation toward working with handicapped students in the area of various learning modalities	60	71.9	6.7 (40.0)	3.3 (66.6)	1.7 (100)	1.7 (100)	1.7 (100)	55.7 (77.3)
31	Instructors inadequately trained in techniques to assist the handicapped student to adapt standard procedures to meet his requirements	60	71.9	8.3 (50.0)	5.0 (100)	1.7 (100)	1.7 (100)	0	53.3 (72.7)
15	Lack of knowledge of what students can do resulting in negative attitudes toward the limitations of the handicapped students	59	71.2	11.9 (70.0)	1.7 (33.3)	1.7 (100)	0	1.7 (100)	54.2 (74.4)
85	Lack of realistic counseling and goal setting	58	69.0	8.6 (50.0)	3.4 (66.6)	0	1.7 (100)	1.7 (100)	53.4 (73.8)
87	Inadequate prevocational exploration background information, and exposure to the world of work	57	68.4	7.1 (40.0)	3.5 (100)	1.8 (100)	0	1.8 (100)	52.6 (71.5)
67	Lack of adequate equipment that will facilitate teaching the handicapped	57	68.4	8.8 (50.0)	3.5 (100)	0	0	1.7 (100)	54.4 (73.9)

only one participant with a sight impairment who rated all barriers except 85 and 67 as most severe. The one participant with a respiratory condition rated barriers, 30, 28, 34, 27, 31 and 85 as most severe. The only blind participant rated all but barrier 31 as being most severe. Seventy percent or more of the participants with no handicapping conditions rated all barriers except 71 as most severe.

Comparison of Ratings of Participants and Ratings of Consumers

To determine whether the predictor variable--rating of feasibility of implementing a recommendation to remove a barrier--could be used to distinguish between participants of the study and consumers (72 handicapped students), a Wilks' Lambda Test of Significance was applied. In all but five of the recommendations there were no significant differences between the ratings of participants and the ratings of consumers. The recommendations in which there were significant differences at the 0.01 level are given in Table VII along with the barriers and mean vectors of participants and consumers. In all five instances the consumers rated the recommendations as more feasible than the participants. Four of the five recommendations were found in the section, "Barriers Within the Handicapped Person, Their Families and Other Advocates". Therefore, in all but five of the recommendations for removing barriers, the null hypothesis is accepted; that is, there is no difference between participants' and consumers' ratings of feasibility of implementing recommendations to remove barriers.

TABLE VII

SIGNIFICANT DIFFERENCES IN FEASIBILITY OF IMPLEMENTATION OF RECOMMENDATIONS[1]

Recommendation Number	Recommendations		Barrier	Mean
96.1	Employ or train counselors who can communicate with deaf students.	96.0	Inability of counselors to communicate with deaf students	Particiapnts: 2.0 Consumers: 1.0
138.1	Develop assist apparatus.	138.0	Lack of physical dexterity to manipulate mechanical devices	Participants: 3.66 Consumers: 1.33
191.1	Provide family counseling.	191.0	Lack of support and encouragement from the family.	Participants: 2.33 Consumers: 1.16
194.2	Provide counseling on a regularly scheduled basis.	194.0	Lack of emotional support from significant "others" in social life of the handicapped, i.e., need for sustained encouragement.	Participants: 3.00 Consumers: 1.33
197.1	Provide emotional support through counseling and other students.	197.0	Inadequate assistance and support which results in fear of entering the world of work.	Participants: 2.33 Consumers: 1.00

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[1] Level of significance 0.01

Predictor variables did not differentiate between the criterion groups in the multiple discriminate function except in the group which included recommendations 38.1 through 66.2. Although the answers of participants and consumers did predict which group they would be in, the equations cannot be solved, and even though it appears that the group can be identified by the answers, there are too many variables to make a definite conclusion.

Since the N-size in the study is small, as is generally the case in Delphi studies, this type of analysis did not produce a definitive conclusion. However, there appears to be a congruence between the groups.

Tasks Recommended for Implementation

When a content analysis of the 351 recommendations (Table VIII) was conducted, twenty-nine tasks were identified as needing to be implemented by community college personnel, advocates for the handicapped, or agencies responsible for the handicapped, to remove barriers which impede the successful completion of vocational technical programs in community colleges by handicapped students.

Discussion of Twenty-nine Identified Tasks

The content analysis of the recommendations was based on information from previous research and project activities reviewed for the study (Chapter II) and from data obtained from the various phases of

TABLE VIII

PROPOSED RATINGS OF THE DESIRABILITY, FEASIBILITY AND COST EFFECTIVENESS OF PERFORMING TASKS TO REMOVE BARRIERS

In the first column the general task to be performed is given with the number of related recommendations in parentheses, and summarized recommendations related to the task.

In the second column are ratings of the desirability of performing the tasks, with 1 being very desirable, 2 desirable, 3 undesirable and 4 very undesirable.

In the third column are the ratings of the feasibility of performing the task with 1 being definitely feasible, 2 possibly feasible, 3 possibly unfeasible, and 4 definitely unfeasible.

In the fourth column are ratings of the cost effectiveness of performing the task with 1 being very cost effective, 2 possibly cost effective, 3 possibly not cost effective, and 4 definitely not cost effective.

General tasks to be performed (number of related recommendations) Summarized recommendations related to the task	Rating of Desirability to Perform Task	Rating of Feasibility to Perform Task	Rating of Cost-Effectiveness for Performing Task
1. Provide for improved and increased counseling services (48)	1	1	1
Increase numbers of counselors available to student and make the job more attractive (5.2, 97.2, 89.2)			
Provide supportive counseling which includes emotional support (194.1, 48.1, 197.1, 194.2)			
Provide supportive counseling which improves student's self concept (176.3, 177.0)			
Provide supportive counseling to bring about positive attitudinal changes in students and to assist him in dealing with frustration (179.1, 173.2, 180.1, 180.2, 154.1)			
Provide group counseling for acquiring knowledge of social behavior, career information, improved self concept, support and assertiveness skills (171.1, 52.2, 178.1, 181.1, 97.1, 183.1)			
Provide counseling to assist with specific problems (186.1, 187.1, 188.1)			
Provide counseling for the family of the handicapped person (190.1, 190.2, 191.1, 191.2, 192.1, 193.1, 196.2)			
Provide reality counseling (164.1, 164.2, 164.3, 85.2, 169.1, 168.1, 168.2, 100.1, 146.1).			

Table VIII - continued

General tasks to be performed (number of related recommendations) Summarized recommendations related to the task	Rating of Desirability to Perform Task	Rating of Feasibility to Perform Task	Rating of Cost Effectivness for Performing Task
Coordinate services with agencies involved (5.3, 109.2)			
Make counseling services more available to student (88.2, 94.1, 143.2, 157.1, 158.1, 182.1, 170.1)			
Provide for student directed counseling and assistance in managing personal affairs (198.1, 174.1)			
2. Establish inservice programs for the vocational technical and academic community college personnel (42)	1	1	1
Inform instructors and classroom personnel about Section 504 of the Rehabilitation Act of 1973 (1.1)			
Provide information on methods of assisting the handicapped student in the classroom (13.1, 24.1, 27.1, 27.2, 29.2, 30.1, 31.2. 32.1, 34 1, 57.2, 63.1, 64.3, 73.1, 150.2)			
Cause positive attitudinal changes in personnel who work with and provide for the education of the handicapped student (16.1, 17.1, 17.2, 19.1, 21.2, 22.2, 26.1, 20.1, 59.3, 15.1)			
Provide training for counselors in the area of realistic counseling and goal setting (85.1)			
Provide training for counselors in the area of diagnostic services (86.1)			
Provide training for counselors to assist students to cope with the educational environment (89.1)			
Provide skills in communicating with deaf students (96.1)			
Provide information regarding the stamina required in employment (99.1)			
Provide information regarding general support and counseling services (104.2, 94.2, 93.1)			
Provide inservice for ancillary personnel such as tutors, wheelchair pushers, attendants, note-takers interpreters, and placement personnel (10.3, 9.3, 12.1, 13.2, 14.2)			

Table VIII - continued

General tasks to be performed (number of related recommendations) Summarized recommendations related to the task	Rating of Desirability to Perform Task	Rating of Feasibility to Perform Task	Rating of Cost-Effectiveness for Performing Task
Provide inservice for administrators in legislation pertaining to the handicapped (86.2, 1.5) (3.1)			
Develop a program for teacher trainer and TEA staff to promote better understanding to the educational needs of the handicapped (30.3)			
3. Secure funding to provide for programs, services, facilities and equipment (26)	1	1	1
Provide funds for prevocational skill training (39.1)			
Secure funds for deaf and hearing impaired students (40.1, 42.1)			
Provide programs in emerging technology (58.1)			
Provide short term vocational courses (41.3)			
Provide for adequate task analysis of technical skill areas (57.1)			
Provide for support personnel such as tutors, readers, and interpreters (9.2, 13.3)			
Provide a better student/trainer ratio (56.2)			
Recruit handicapped students (105.1)			
Develop and expand counseling services (106.1)			
Utilize and increase existing financial resources (108.1, 123.1, 122.1)			
Make funds available from Social Security Disability Insurance for vocational education (2.1)			
Provide funds for special equipment (81.1, 74.1, 78.2, 67.2, 70.1, 71.1, 71.2)			
Provide funds for housing for handicapped students (135.1, 134.1, 134.2)			
Establish funding for vocational education of the handicapped as a top funding priority (10.2)			

Table VIII - continued

General tasks to be performed (number of related recommendations) Summarized recommendations related to the task	Rating of Desirability to Perform Task	Rating of Feasibility to Perform Task	Rating of Cost-Effectiveness for Performing Task
4. Provide resource persons and support services to assist instructors and students (24)	1	1	1
Adapt the classroom for the handicapped student (64.0, 37.1)			
Provide liaison information to the world of work (60.2, 36.1)			
Provide remedial education or tutors (161.1, 142.1, 160.2)			
Provide support to assist the student in coping with the demands of school (178.3, 181.3, 66.1, 65.1, 98.2, 176.2, 177.2, 33.2, 104.1)			
Provide assistance to instructors (31.1, 55.1, 56.4)			
Provide tutorial support to students (38.2, 72.1, 156.2)			
Set up employment for the handicapped through the work study program (127.1)			
Utilize medical consultation (159.1)			
5. Plan for individual students (24)	1	1	1
Provide planning with short term goals to improve self concept (176.1, 181.2)			
Provide planning to resolve problems of emotional impairment (173.1)			
Provide planning to develop daily survival skills (165.1, 165.2, 155.1)			
Plan with students who are unable to cope with complex written material (162.1, 162.2)			
Plan with students who have restrictive medical and physical conditions (152.1, 141.1, 137.1, 137.3, 138.2, 140.2) 140.2)			
Provide for employment planning and training (73.2, 92.1, 128.1, 60.3)			
Provide for problems with learning (101.2, 84.2, 72.2, 13.2)			
Provide for flexibility in curriculum (45.2)			

Table VIII - continued

General tasks to be performed (number of related recommendations) Summarized recommendations related to the task	Rating of Desirability to Perform Task	Rating of Feasibility to Perform Task	Rating of Cost-Effectiveness for Performing Task
Contact student on a regular basis (48.4)			
6. Provide special materials or programs to accommodate the handicapped (22)	1	1	2
Provide special equipment and assistance in the area of listening skills (148.1, 151.1, 149.1, 150.1, 156.1, 150.3)			
Provide assistance in the development of communication skills (147.1, 142.3)			
Provide assistance in development of vocabulary skills (163.1, 163.2)			
Provide for alternate methods for administering examinations (51.1, 50.1, 50.2, 56.1)			
Design work stations in vocational classes (77.1)			
Provide for special instructions for deaf students (167.1)			
Provide for an adjustment of the rate of vocational education experiences (153.2, 153.1, 155.2, 184.1, 166.1)			
Provide for special accommodations for handicapped students (153.3, 49.1)			
7. Conduct public education regarding the capabilities and needs of the handicapped utilizing the news media (16)	1	1	1
Inform the public at the national, state and local levels about handicapping conditions and the capabilities and needs of the handicapped (1.4, 22.1, 113.1, 114.1, 116.1, 117.1, 118.1, 120.1, 121.1, 121.2, 129.1, 130.1, 132.1, 132.2)			
Provide an ongoing public relations effort (25.3, 198.2)			
8. Provide individualized instruction with planned scope and sequence of curriculum and open entry/exit points for students (14)	1	1	1
Plan self-paced, independent instruction (143.1, 145.1)			

Table VIII - continued

General tasks to be performed (number of related recommendations) Summarized recommendations related to the task	Rating of Desirability to Perform Task	Rating of Feasibility to Perform Task	Rating of Cost-Effectiveness for Performing Task
Establish a sequential curriculum from elementary through post-secondary vocational technical programs (61.1)			
Provide diagnostics for adults with learning disabilities (101.1)			
Provide for behavior modification programs (47.1)			
Evaluate physical capabilities (35.1)			
Individualize programs for handicapped students (46.1, 26.2, 42.2, 45.1)			
Define behavioral objectives (16.2)			
Individualized testing procedures (56.3)			
Establish feasible entry/exit points (65.2, 45.3)			
9. Conduct research in areas of needs assessment, employment, materials, and equipment (12)	1	2	2
Research communication problems in instructional situations (43.1)			
Conduct local needs assessments of the disabled (82.1, 82.3, 32.2)			
Research employment assistance and vocational information (125.2, 95.3)			
Research and design instructional materials, special devices, equipment and tools (68.1, 69.1, 75.1, 76.1, 84.1, 110.1)			
10. Provide pre-service training and teacher preparation in colleges and universities (12)	1	2	1
Provide information on agencies which serve the handicapped and resources available for the handicapped (4.3, 87.3, 15.2)			
Provide information on handicapping conditions and individual differences of persons with handicaps (28.1)			
Educate to effect positive attitudinal changes (114.2, 59.1, 119.1, 196.1)			

Table VIII - continued

General tasks to be performed (number of related recommendations) Summarized recommendations related to the task	Rating of Desirability to Perform Task	Rating of Feasibility to Perform Task	Rating of Cost-Effectiveness for Performing Task
Inform about curriculum adaptation (37.3)			
Provide information on the needs of the handicapped (82.2, 30.1)			
Provide training for medical personnel to help the disabled attain the highest level of skill possible (35.2)			
11. Coordinate services with employers in business and industry. (10)	1	2	2
Assist in employment adjustment (14.1)			
Determine employment needs of business and industry (83.2)			
Assist in the attainment of employment (36.2, 60.1)			
Provide information regarding the benefits of hiring the handicapped (125.1, 132.2)			
Remove architectural barriers in industry (133.1, 133.2, 133.3)			
Promote technology to benefit the handicapped (58.2)			
12. Obtain special or adapted equipment (10)	1	2	2
Purchase special equipment with resources and funds available (64.4, 80.1)			
Adapt existing equipment (74.2)			
Construct special equipment (66.2)			
Develop a learning center (78.1)			
Develop assist apparatus for physical handicaps (139.1, 139.2, 140.1, 142.2, 138.1)			
13. Improve communication and coordination of services between vocational technical programs and agencies (10)	1	2	2
Establish interagency committees (112,1, 4.2, 112.2, 111.1)			
Designate a liaison person (4.1, 111.2)			
Establish mutual cooperation and exchange of information (8.1, 88.1, 48.2)			

Table VIII - continued

General tasks to be performed (number of related recommendations) Summarized recommendations related to the task	Rating of Desirability to Perform Task	Rating of Feasibility to Perform Task	Rating of Cost-Effectiveness for Performing Task
Publish a director of agencies and services for the area served by each community colleges (109.1)			
14. Obtain legislative support (9)	1	1	1
Provide funding for programs for the handicapped (10.1, 61.2, 108.2)			
Allow for tax credits for employers of the handicapped (126.1)			
Obtain increased personnel to assist with the handicapped (55.2, 34.2)			
Remove earnings limitations for social security (2.2)			
Change OSHA rules (130.2)			
Cause wording of legislation to be less difficult (1.3)			
15. Enlist improved and increased services from the Texas Rehabilitation Commission (8)	1	2	2
Provide for on-going support for students in early years of training and job experience (171.2, 21.1, 128.2, 197.2, 48.3)			
Determine employers' needs (83.3)			
Provide yearly interviews to recipients of Social Security Disability Insurance (2.3)			
Provide more rehabilitation counselors on community college campuses (5.1)			
16. Provide for increased interaction between handicapped and non-handicapped students (8)	1	2	2
Provide awareness and orientation programs (21.1, 44.1, 23.1, 115.1)			
Purposefully design integrated activities (6.1, 6.2, 178.2, 7.2)			
17 Develop a centralized system of resources (7)	1	1	1
Develop a system for vocational resources similar to the Texas Learning Resource Center, Division of Special Education, Texas Education Agency to provide equipment, ancillary personnel such as interpreters, specially designed instructional materials and equipment, career information and job forecasts, specialized courses developed for the handicapped student and information regarding appropriate programs (67.1, 9.1, 75.2, 79.2, 95.2, 41.2, 106.2)			

Table VIII - continued

General tasks to be performed (number of related recommendations) Summarized recommendations related to the task	Rating of Desirability to Perform Task	Rating of Feasibility to Perform Task	Rating of Cost Effectiveness for Performing Task
18. Identify instructors' responsibilities for handicapped students (6)	2	2	2
Schedule regular counseling sessions with students(99.2, 25.2, 136.1)			
Maintain communication with counselors (98.1)			
Keep the student's family informed of progress (103.1)			
Be aware of student's medication needs (137.2)			
19. Provide special materials and curriculum (6)	1	2	2
Provide pre-developed material and instructions for modification of curriculum (37.2, 54.1, 54.2, 53.1, 53.2)			
Provide materials which could be adapted to sensory abilities of the student (63 2)			
20. Develop policies to provide programs and assistance for the handicapped (5)	1	2	2
Facilitate the student's exit when he has achieved to the highest level of his ability (62.1, 62.2)			
Require instructional education for the post-secondary vocational instructor (30.2)			
Implement local application of Section 504 of the Rehabilitation Act (12.)			
Mandate planning for the handicapped students (7.1)			
21. Develop administrative planning for the handicapped (4)	1	2	2
Provide educators with information about the needs of the handicapped (25.1, 33.1)			
Plan for such activities as registration and mobility orientation (8.2, 11.1)			
22. Expand and develop programs of vocational education (4)	1	2	2
Provide for a broader range of skill training (52.1)			
Provide for specialized courses to teach limited skills through continuing education programs (41.1)			

Table VIII - continued

General tasks to be performed (number of related recommendations) Summarized recommendations related to the task	Rating of Desirability to Perform Task	Rating of Feasibility to Perform Task	Rating of Cost-Effectiveness for Performing Task
Provide expanded electives and subject areas (59.2)			
Provide basic programs in language and math for specific departments (38.1)			
23. Develop career information for the handicapped (4)	1	2	1
Provide prevocational exploration, career information and vocational evaluation and counseling (87.1, 87.2, 95.1, 131.1)			
24. Articulate community college vocational technical programs of instruction with public schools (4)	2	2	2
Increase emphasis on career and vocational education in public schools (39.2, 99.3)			
Stress the teaching of basic skills at the high school level (38.3, 161.2)			
25. Solicit assistance from the community (4)	2	2	2
Apply to local civic groups for funding (83.1)			
Make needs for scholarships and grants known (108.3)			
Provide an accessible transportation system for handicapped students (122.3)			
Involve the community and vocational classes in construction or acquisition of equipment (70.2)			
26. Teach handicapped students to communicate problems and use resources available (3)	2	2	1
Assist students to communicate their needs (65.2, 26.3)			
Help students to use counseling services available (93.2)			
27. Develop a method of accountability (1)(107.1)	1	1	1
28. Develop programs for deaf students (1)	2	2	2
Develop classes for deaf and language/learning disabled students (29.1)			
29. Establish advocacy groups (1)	2	2	2
Establish an affirmative action program (3.2)			

this study. The information which supports the possibility of implementing the twenty-nine tasks is presented in the following paragraphs.

1. Provide for improved and increased counseling services. This task had more related recommendations (48) than any of the twenty-nine general tasks to be performed. This recommendation is also supported by projects such as the Enabler programs in California (Phillips, et al., 1977).

2. Establish inservice programs for the vocational technical and academic community college personnel. Forty-two recommendations made by participants of the study were related to this task. Also, two of the five items rated highest by validations (COPES, 1977) in twenty-four community colleges in California in 1975-76 were "special education qualifications of instructional staff working with the handicapped", and "qualifications of enablers/coordinators and of enablers/coordinators and directors in charge of administering occupational programs and services for the handicapped" (p. 3).

3. Secure funding to provide for programs, services, facilities, and equipment. Although Section 504 of the Rehabilitation Act of 1973 was enacted as a civil rights bill for the handicapped, no funds were appropriated for implementing programs, and other than the excess funds which are supposed to be available for the handicapped in vocational technical programs in community colleges, funds for programs, seminars, facilities and equipment must be secured from other sources. Programs include those provided by the Special Services Office of the United

States Office of Education as described by Hessler (1976). Twenty-six recommendations, the third highest in rank order, supported this task. (Table VII, p. 141).

5. Plan for individual students. Planning for individual students is necessary for a successful program as demonstrated by the DeAnza College Special Education Programs (Reid, March, 1978). This was also observed to be one of the elements for successful programming for handicapped post-secondary students in Suburban Hennepin County Area Vocational-Technical Centers (1978). Individual educational plans are also mandated by P. L. 94-142. Participants of the study made twenty-four recommendations which were related to this task (Table VIII, p. 141).

6. Provide special materials or programs to accommodate the handicapped. Hessler (1976) discussed needs for special equipment and trained personnel to assist the handicapped and Lawrence, Krieger, and Barad (1972) described the limitations imposed by inadequate curriculum and other specific academic and architectural barriers. Two of the eleven barriers (71 and 67) rated very severe and moderately severe, (Table V, p. 135) indicated a lack of funds, and therefore a lack of special equipment for the handicapped. Twenty-two recommendations were made to provide special materials or programs (Table VIII, p. 141).

7. Conduct public education regarding the capabilities and needs of the handicapped, especially through the news media. According to a report prepared by The Regional Affirmative Action Clearinghouse (1976), educating the general public is very important to promoting the

employment of the handicapped. There were sixteen recommendations made to conduct public education (Table VIII, p. 141).

8. Provide individualized instruction with planned scope and sequence of curriculum and open entry/exit points for students. According to a study conducted at the Wisconsin Vocational Studies Center (Kumar, 1977), lack of individualized instruction and absence of open entry/exit points for students was a factor in students becoming discouraged, frustrated, and developing a poor self image. Fourteen recommendations were made by participants which were related to individualized instruction (Table VIII, p. 141).

9. Conduct research in areas of needs assessment, employment, materials, and equipment. Several project reports (Spencer, 1977; Bayne, et al., 1977) emphasized the need for obtaining information about the handicapped population on the community college campus and the availability of vocational programs for the handicapped in community colleges. Participants gave twelve recommendations which support this task in the area of research (Table VIII, p. 141).

10. Provide pre-service training and teacher preparation in colleges and universities. The barrier, lack of programs to prepare post-secondary instructors to teach the handicapped, was rated most severe (78%) (Table V, p. 135). Twelve recommendations support the need for pre-service training and teacher preparation in colleges and universities (Table VIII, p. 141).

11. Coordinate services with employers in business and industry. A report concerned with the employment of the handicapped (Roberts and

Brown, 1976) indicated that employers' attitudes were the greatest barriers to successful employment of the handicapped. Ten recommendations from this study supported this task (Table VIII, p. 141).

12. Obtain special or adapted equipment. Providing specialized equipment and adaptive devices was a part of the program in community colleges in California which helps students overcome barriers (Phillips, et al., 1977). Wiig (1972) suggested employing special teaching methods and equipment for teaching learning disabled students. Ten recommendations supported this task (Table VIII, p. 141).

13. Improve communications and coordination of services between vocational technical programs and agencies. One project, the Michigan model, encouraged inter-agency cooperation through an inter-agency supervisory committee which makes recommendations to both agencies and vocational programs (Michigan Department of Education, 1977). Ten recommendations were made by participants to support this task (Table VIII, p. 141).

14. Obtain legislative support. Legislation for the handicapped in community college programs resulted from one of the more extensive reports describing the physically disabled population in California (Spencer, 1977). Legislative appropriations for the handicapped in community colleges were not affected by the recent property tax reform of proposition 13, which caused a decrease in funds available for other educational programs (Sullivan, 1978). Nine recommendations covered a variety of areas supporting legislative support (Table VIII, p. 141).

15. Enlist improved and increased services from the Texas Rehabilitation Commission. Eight recommendations were made by participants to

improve and increase services from the Texas Rehabilitation Commission (Table VIII, 141). The Texas Rehabilitation Commission now has major responsibility for assisting the handicapped in community colleges (Status Report of General Special Programs, Texas Rehabilitation Commission, FY 1976).

16. Provide for increased interaction between handicapped and nonhandicapped students. One of the needs expressed by a student in Spencer's study (1977) was for ". . . more social activities on campus. We need to make more friends" (p. 39). The San Diego Community College District recommends mainstreaming students whenever possible. This helps handicapped students obtain "educational opportunities available to all students" (Resource Center for the Handicapped, 1977, p. 1). Participants in this study made eight recommendations which indicate that this task should be completed (Table VIII, p. 141).

17. Develop a centralized system of resources. There were seven recommendations made which resulted in the identification of this task (Table VIII, p. 141).

18. Identify instructor's responsibilities for handicapped students. The need for implementation of this task is based on legislation such as P.L. 94-142, which requires an individualized educational plan for students under 21; P.L. 94-482, which emphasizes mainstreaming; and Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112), which is the bill of rights for handicapped citizens. Six recommendations indicated concern for individualized instruction (Table VIII, p. 141).

19. Provide special materials and curriculum. A study by Lawrence, et al., (1972) supported six recommendations in this study regarding special materials and curriculum (Table VIII, p. 141). Their study described how curriculum can have a limited effect on students.

20. Develop policies to provide programs and assistance for the handicapped. Although there were only five related recommendations, (Table VIII, p. 141), this was also considered an important task in two separate studies in Illinois (Fabac, February 1978) and California (Smith, 1977).

21. Develop administrative planning for the handicapped. The California Community College Chancellor's office has developed operational guidelines for administrative planning for the handicapped (Smith, 1977). An interest in the problem was indicated by the fact that 15% of the participant group were community college administrators. Four recommendations pertain to this task (Table VIII, p. 141).

22. Expand and develop programs of vocational education. A study in Kentucky (Bayne, et al., 1977) indicated that many handicapped students were in programs which had little appeal and were inconsistent with manpower needs of the area. Four recommendations were made in this study to expand and develop programs of vocational education (Table VIII, p. 141).

23. Develop career information for the handicapped. Several reports of projects emphasized the importance of better job counseling and career information to the handicapped (Spencer, June 1977; Schneps and Slater, 1974; COPES, 1977). Four related recommendations pertained

to this task (Table VIII, p. 141).

24. Articulate community college vocational technical programs of instruction with public schools. Section 504 of the Rehabilitation Act of 1973 emphasizes recruiting handicapped students, especially from the public school, therefore articulation with the public schools is indicated. Four recommendations were related to the public schools (Table VIII, p. 141).

25. Solicit assistance from the community. One of the eleven barriers (71) rated as very severe or moderately severe referred to lack of funds for special expenses (Table V, p. 135). The local community should be considered a source of such funds. Four recommendations support this task.

26. Teach handicapped students to communicate problems and use available resources. One of the eleven barriers rated very severe or moderately severe by the participants of the study (Table V, p. 135) was the educator's lack of knowledge of what students can do. This lack results in negative attitudes toward the abilities of the handicapped student. When the student can communicate needs and abilities, this barrier is overcome. Three recommendations made by participants in the study support this task (Table VIII, p. 141).

27. Develop a method of accountability. A report of a project at Triton College, "Success Oriented Service" (Tetzlaff, 1976) emphasized the importance of identifying handicapped students for the purpose of providing special services, referrals to special staff, and obtaining

resources and materials. The Student Accountability Model (SAM) (Gold, 1977) in California stressed a follow-up information accountability project which provides information to be used for planning and evaluating programs. Only one recommendation was made to support this task, however, an accountability plan is needed to obtain excess funding (P.L. 94-142, 1975).

28. *Establish advocacy groups*. Barbara Sullivan (1978) described the establishment of advocacy groups as the first step toward obtaining legislative assistance for the handicapped student in community colleges. Only one recommendation supported this task (Table VIII, p. 141).

29. *Develop programs for deaf students*. A statewide study of post-secondary education for deaf students in Maryland resulted in a recommendation for regional programs specifically for the deaf (Harkins, 1978a). One recommendation supported this task in this study (Table VIII, p. 141).

Analysis and Ratings of Tasks by Steering Committee

The twenty-nine identified tasks to be implemented or considered for policy formulation were presented to the 17 steering committee members for their analysis of the ratings of desirability, feasibility and cost effectiveness for performing the tasks (Appendix I). (Two steering committee members had moved out of the state since the completion of Round III.) Sixteen of the seventeen members responded. Committee members were polled by telephone, and also were requested to return their response forms by mail. One member could not be contacted, nor was his response form received. One of the handicapped students and the consultant from the Texas Rehabilitation Commission agreed with the suggested ratings as they were. Alternate ratings of the tasks were offered by all other members of the committee and some offered supporting comments. Alternate ratings and comments of the steering committee are presented in Table IX.

As a result of the responses by the steering committee members, changes were made in the assigned ratings of eight of the general tasks to be performed. These are presented in Table X (p. 167).

After examing the results of the study, the graduate committee recommended that a post hoc analysis of the identified tasks as compared to barriers which were rated as most severe be conducted. A decision was made to compare the barriers selected by 66% of the participants as being very severe and moderately severe with the twenty-nine tasks identified from the content analysis of the 351 recommendations. This information is presented in Table XI (p. 160). The resulting information indicated that fourteen of the tasks (Table XI) were related to at least one of the barriers selected by at least 66% of the participants as being most severe. The relationship was established by examining Table VIII (p. 141) and the related recommendations, then matching the recommendations to the barriers.

It is recommended that the fourteen tasks presented in Table XIV (p. 184) and discussed on pages 169-71 be considered as priority tasks to be implemented. Each is related to one or more barriers considered most severe.

TABLE IX

RESPONSES OF STEERING COMMITTEE MEMBERS TO IDENTIFIED TASKS, AND RATINGS OF DESIRABILITY, FEASIBILITY, AND COST EFFECTIVENESS OF PERFORMING TASKS TO REMOVE BARRIERS PRESENTED IN TABLE VIII

Key to types of Steering Committee Members

1 - Handicapped Students	6 - Post-Secondary Teacher Educator
2 - Secondary Education Personnel	7 - TEA Special Education Consultant
3 - Community College Vocational Directors	8 - TEA Occupational Education and Technology Consultant
4 - Community College Vocational Program Personnel	9 - College Coordinating Board Representative
5 - Pilot Project Personnel	10 - TRC Representative
	11 - National Consultant

General Tasks to be Performed		Ratings and Comments of Participants Not In Agreement			
	Type of Member	Desirability	Feasibility	Cost Effect	Comments
1. Provide for improved and increased counseling services.	2	2	2	2	Counselors are not the only ones who can counsel. Suggest the counselor train people to counsel.
	3		2	2	Counseling services are very expensive.
2. Establish inservice programs for the vocational technical and academic community college personnel.	3			2	
	4		2	2	
	4		2	2	
3. Secure funding to provide for programs, services, facilities and equipment.	3	2	2	2	Not that much need for increased funding. Changes are attitudinal.
	4				Agree with ratings. Great need for funding for transportation.
	7				No change. Funds are available if educators know where to go.
4. Provide resource persons and support services to assist instructors and students.	2	2			
	7				No change. A lot has been done and should be continued.

Table IX - Continued

General Tasks to be Performed		Ratings and Comments of Participants Not In Agreement			
	Type of Member	Desirability	Feasibility	Cost Effect	Comments
5. Plan for individual students.	3				No change in ratings. Plans for "normal" students may or may not be appropriate for handicapped students.
	4		2	2	
	5	2			
	7				No change in ratings. The Individual Educational Plan concept should be extended to persons over 21.
6. Provide special materials or programs to accommodate the handicapped.	2	2	2	2	
	4	3			We can never get enough special materials.
	4	3	3	3	
	5			1	Rate all 1's.
	5			1	
7. Conduct public education regarding the capabilities and needs of the handicapped utilizing the news media.	2	2			
	7				Alot has been done and should be continued. No change.
8. Provide individualized instruction with planned scope and sequence of curriculum and open entry/exit points for students.	2				No change in rating. Add: Train staff to implement.
	3		2	2	
	3				No change. Very much in agreement.
	4			4	Due to fact that vocational work stations are costly, design for one individual is too costly.
	5			3	

Table IX - Continued

General Tasks to be Performed	Ratings and Comments of Participants Not In Agreement				
	Type of Member	Desira-bility	Feasi-bility	Cost Effect	Comments
9. Conduct research in areas of needs assessment, employment, materials and equipment.	1		1	1	Great need for assistance for employment.
		2			
	3	2			Need to place efforts elsewhere.
	4			1	
	5		1	1	Rate all 1's.
	5		1	1	
	6		1	1	
	7				No change. This has been done to some extent.
10. Provide pre-service training and teacher preparation in colleges and universities.	1		1		
	2		1		
	2		1		
	3		1		
	3	2			
	4	2		2	
	4		1		
	4			2	
	5		1		Rate all 1's.
	5			2	
	5		1		
	6		1		
	7				No change in ratings. This is essential.
11. Coordinate services with employers in business and industry.	1		1	1	
	2	2			
	3		1	1	Very important to work with employers.
	4			1	
	5		1	1	Rate all 1's.
	5			1	

Table IX - Continued

General Tasks to be Performed		Ratings and Comments of Participants Not In Agreement			
	Type of Member	Desirability	Feasibility	Cost Effect	Comments
12. Obtain special or adapted equipment.	3		1	1	
	4			3	
	5		1	1	Rate all 1's.
	5		1	1	
13. Improve communication and coordination of services between vocational technical programs and agencies.	1		1	1	
	3		1	1	
	4		1	1	
	4			1	
	5		1	1	Rate all 1's.
	5		1	1	
14. Obtain legislative support.	3	2	3	3	There is enough legislative support--we don't need more.
	5		2		
	7				No change. We have as much legislative support as we are going to get.
15. Enlist improved and increased services from the Texas Rehabilitation Commission.	2		1	1	
	3		1	1	Services are inadequate.
	4		1	1	
	5		1	1	Rate all 1's.
16. Provide for increased interaction between handicapped and non-handicapped students.	2	2	1	3	
	3		1	1	
	4		1	1	
	5		1	1	Rate all 1's.
	5		1	1	
	5	2			

Table IX - Continued

General Tasks to be Performed	Ratings and Comments of Participants Not In Agreement				
	Type of Member	Desirability	Feasibility	Cost Effect	Comments
17. Develop a centralized system of resources.	2	2	2	2	
	3		2	3	
	3	3	3	3	Need local resources.
	4			3	Alot of equipment would have to be stored and maintained. Too costly.
	5	3	3	3	
	7				No change. Could use the Texas Learning Resource Center, but could be augmented.
18. Identify instructor's responsibilities for handicapped students.	2	1	1	1	Student must also assume responsibility for self.
	3	1	1	1	This is the most important task.
	3				Instructors have responsibility for all students. No change in rating.
	4	1	1	1	
	4		1		Should be done.
	5	1	1	1	Rate all 1's.
	6	1	1	1	
19. Provide special materials and curriculum	2		1		
	3		1	1	
	4			4	Special materials not cost effective.
	5		1	1	Rate all 1's.
	5			1	
	6		1	1	

Table IX - Continued

General Tasks to be Performed	Ratings and Comments of Participants Not In Agreement				
	Type of Member	Desirability	Feasibility	Cost Effect	Comments
20. Develop policies to provide programs and assistance for the handicapped.	2		1	1	
	3		1	1	
	4		1	1	
	5		1	1	Rate all 1's.
	5		1		
	7				National and state policies exist. Need local policies.
21. Develop administrative planning for the handicapped.	2		1	1	
	3		1	1	This is very important.
	4		1	1	
	5		1	1	Rate all 1's.
22. Expand and develop programs of vocational education.	2	2		3	
	3			3	Not cost effective.
	5		1	1	Rate all 1's.
	6		1	1	
	7				Expand and develop programs of vocational education for the handicapped.
23. Develop career information for the handicapped.	1		1		Handicapped students need more career information.
	2		1		
	4		1		
	4		1		
	5		1		
	5		1		
	5			3	Not sure information for handicapped is all that different.
	6		1		

Table IX - Continued

General Tasks to be Performed	Ratings and Comments of Participants Not In Agreement				
	Type of Member	Desirability	Feasibility	Cost Effect	Comments
24. Articulate community college vocational technical programs of instruction with public schools.	2	1	1	1	
	2	1	1	1	
	3	1	1	1	
	3	1	1		This is where students come from.
	4	1	1	1	Should be done.
	5	1	1	1	Rate all 1's.
25. Solicit assistance from the community.	2	1	1	1	
	3	1			
	4		1	1	
	5	1	1	1	Rate all 1's.
26. Teach handicapped students to communicate problems and use resources available.	2	1	1		
	3	1		3	Desirable but not cost effective.
	4	1			
	5	1	1	1	Rate all 1's.
	6	1			
27. Develop a method of accountability.	3			3	Not cost effective.
	5			2	
28. Develop programs for deaf students.	3	3	3	3	Deaf students need to be mainstreamed. Experience with 50 to 100 deaf students a year shows they learn better in regular classes.
	4	1	1	1	Deaf need to be able to communicate and cannot do so in a regular class.
	5	1	1	1	Rate all 1's.
	5	1	1	1	
29. Establish advocacy groups.	2	1		1	
	5	1	1	1	Rate all 1's.
	5	1			

TABLE X

CHANGES MADE IN RATINGS OF GENERAL TASKS TO BE PERFORMED AS A RESULT OF ANALYSIS OF STEERING COMMITTEE RATINGS PRESENTED IN TABLE IX

General Tasks to be Performed	Former Ratings			Revised Ratings		
	Desirability	Feasibility	Cost Effect	Desirability	Feasibility	Cost Effect
10. Provide pre-service training and teacher preparation in colleges and universities.	1	2	1	1	1	1
11. Coordinate services with employers in business and industry.	1	2	2	1	2	1
13. Improve communications and coordination of services between vocational technical programs and agencies.	1	2	2	1	2	1
16. Provide for increased interaction between handicapped and non-handicapped students.	1	2	2	1	1	2
17. Develop a centralized system of resources.	1	1	1	1	1	2
20. Develop policies to provide programs and assistance for the handicapped.	1	2	2	1	1	2
23. Develop career information for the handicapped.	1	2	1	1	1	1
24. Articulate community college vocational technical programs of instruction with public schools.	2	2	2	1	1	1

TABLE XI

CROSS TABULATION OF BARRIERS RATED VERY SEVERE AND MODERATELY SEVERE BY 66% OR MORE OF RESPONDENTS BY THE TASK(S) NECESSARY FOR REMOVAL OF THE BARRIERS AS IDENTIFIED BY TABLE IX, p. 157

Barriers (Percent of Participants) (see Table XIII, p. 179)	Identified Task to be Implemented (see Table IX)																												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
30 (78.0)		1								1										1									
28 (73.3)										1																			
34 (72.9)		1												1															
24 (72.8)		1																											
71 (71.9)			1																										
31 (71.7)		1		1																									
27 (71.7)		1																											
15 (71.2)		1								1																			
85 (69.0)	1	1																											
37 (68.4)										1													1						
67 (68.4)			1														1												
132 (67.9)							1				1																		
23 (67.8)																1													
134 (66.7)			1																										
32 (66.1)		1							1																				
88 (66.1)	1												1																
12 (66.0)		1																		1									
82 (66.0)									1	1																			
Number of Barriers Related to Each Task	2	9	3	1	0	0	1	0	2	5	1	0	1	1	0	1	1	0	0	2	0	0	1	0	0	0	0	0	0

Establish inservice programs for the vocational technical and academic community college personnel. This task had forty-two recommendations for removal of barriers which supported this identification. In addition it was related to the greatest number of barriers considered most severe by at least 66% of the participants (30, 34, 24, 31, 27, 15, 85, 32, 12).

Provide pre-service training and teacher preparation in colleges and universities. Five barriers (30, 28, 15, 87, 82) considered most severe were directly related to this task. These barriers were identified through an analysis of the twelve related recommendations.

Secure funding to provide for programs, services, facilities, and equipment. Three barriers (71, 67, 134) considered most severe and twenty-six recommendations for removal of barriers support this task.

Provide for improved and increased counseling services. This task had the largest number of supporting recommendations for removal of barriers (48), and related to two (85, 88) of the eighteen barriers considered most severe.

Develop policies to provide programs and assistance for the handicapped. Two (30, 12) of the barriers rated most severe and five of the recommendations for removal of barriers supported the identification of this task.

Provide resource persons and support services to assist instructors and students. Twenty-four recommendations for removal of barriers resulted in the identification of this task, which is also related to one (31) of the barriers considered most severe.

Conduct public education regarding the capabilities and needs of the handicapped utilizing the news media. This was directly related to one (132) of the barriers considered most severe by at least 66% of the participants and also was related to fourteen of the recommendations for removal of barriers.

Conduct research in areas of need assessment, employment, materials and equipment. Twelve recommendations for removal of barriers and one barrier (82) considered most severe supported this task.

Coordinate services with employers in business and industry. One barrier (132) considered most severe and ten recommendations for removal of barriers related to this task.

Improve communication and coordination of services between vocational technical programs and agencies. One barrier (88) considered most severe by at least 66% of the participants and ten recommendations for removal of barriers related to this task.

Obtain legislative support. Nine recommendations for removal of barriers and one barrier (34) considered most severe related to this task in obtaining legislative support to add counselors and staff.

Provide for increased interaction between handicapped and non-handicapped students. One of the barriers rated most severe (23) and eight recommendations for removal of barriers related directly to this task.

Develop a centralized system of resources. Seven recommendations for the removal of barriers and one barrier (67) considered most severe led to the identification of this task.

Develop career information for the handicapped. This task related to at least one of the barriers considered most severe (87) and four of the recommendations for removal of barriers.

Summary

A great amount of information is collected in a policy focus Delphi study, and all the information is considered of interest and pertinent to final policy information. The information was summarized in the eight tables presented in this chapter. The criteria for successful completion of vocational technical programs were listed with the numbers of participants selecting the criterion. All of the barriers, recommendations for removing the barriers, ratings of both the severity of the barrier and of the feasibility of recommendations for removing the barriers and comments regarding barriers were presented in a summary table. Two tables presented displays of participants' ratings of the eleven barriers rated most severe by employment roles and handicapping conditions. A crosstabulation of barriers rated most severe by 66% of the participants and tasks identified for removal of barriers was presented. A comparative analysis of ratings of feasibility of implementing recommendations made by participants with ratings made by consumers (handicapped students) resulted in the identification of only five recommendations in which the two populations differed at the 0.01 level of significance. Ratings of twenty-nine identified tasks which could be considered for implementation or for policy formulation were presented to participants and resulting differences of opinion and altered ratings of tasks were presented in three separate tables.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter contains a brief summary which includes the purpose of the study, an overview of the research design, and data analyses procedures. The results of the data are presented, including the identification of twenty-nine tasks which should be considered for policy formulation and implementation. Conclusions and recommendations based on general outcomes of the study are presented as a final summation of this chapter.

Summary

The purpose of the study, the procedures followed, and the methods utilized in analyzing the data are summarized in the following paragraphs.

Purpose

The purposes of this study were to identify the barriers which prohibited handicapped students from entering or completing vocational technical programs in community colleges in Texas, to identify the critical tasks necessary to overcome these barriers, and, based on the data collected and analyzed, to make recommendations regarding the removal of these barriers.

Procedures

The principal research technique was a policy focus Delphi study.

in which informed judgments were solicited from experienced specialists or "experts". Initial participants included members of a steering committee, who also provided input at various decision points in the study. The steering committee nominated fifty-three additional specialists, each associated in some manner with community colleges in Texas. These participants included handicapped students, teachers and instructors, teacher trainers, administrators in agencies which serve the handicapped, counselors, administrators in community colleges, agency consultants, persons engaged in transportation of the handicapped, a member of the college coordinating board, a clinical psychologist, a research psychologist, a public school administrator, and a vocational adjustment coordinator.

Few related research studies were found in the course of a literature review. However, as a result of contacting each state department of education in the United States and its territories, eleven research reports and eleven reports of related projects were received and reviewed for the study. Most reports were as recent as 1977 or 1978, which indicated that research and projects were probably responding to recent legislation for the handicapped.

The Round One questionnaire requesting identification of barriers was mailed to the participants. In addition, seven criteria which had been identified by the steering committee as the criteria for successfully completing vocational technical programs by handicapped students in community colleges were presented to the participants for their selection. Also included was a request for identifying information regarding employment role, handicapping condition, if any, and the participant's knowledge of and relationship to handicapped students. Participants submitted 402 barriers which were then combined and condensed into 198 barriers to be presented in Round Two.

In the Round Two questionnaire the participants were requested to rate the severity of the barriers on a scale of one through four, and make recommendations for removing the barriers rated very severe and moderately severe.

The relative frequency (percent) of how the participants rated the barriers and the mean scores were presented to the participants in Round Three. They were asked to examine the frequency ratings of the barriers, mark any mean score they thought was too high or too low, and explain why they disagreed with the score.

Barriers and recommendations for removing those barriers were analyzed during the second part of the study. Each participant was asked to rate the feasibility of implementing the recommendations on a scale of one through five. Due to the magnitude of information, the questionnaire was divided with each part consisting of approximately one third of the questions. One section of the questionnaire was then randomly distributed to each of the participants in the study at a workshop, or (for participants not attending the workshop) by mail. The questionnaire was also distributed to consumers (handicapped vocational technical students in community colleges) selected by Texas Rehabilitation Counselors. Through Wilks' Lambda Test of Significance the participants' answers were compared to the students' answers.

Through further synthesis of the recommendations, twenty-nine tasks were identified which might result in policy formation or might be implemented by community colleges, agencies, or advocates for the handicapped. Ratings of desirability, feasibility and cost effectiveness of implementing the tasks were assigned and presented to the steering committee for their analyses. As a result of the steering committee's altered ratings and comments, eight tasks were assigned revised ratings.

Data Analysis

All of the data collected from the three rounds of the Delphi study, including the barriers and recommendations for removing those barriers, the rated severity of the barriers, the rated feasibility of implementing recommendations, and comments regarding the ratings were considered findings of the study. The steering committee established seven criteria, any one of which might constitute successful completion of a vocational technical program by a handicapped student in a community college. Participants then selected and rated the seven criteria, which resulted in most participants selecting more than one.

Eleven barriers rated most severe by 60 participants were analyzed according to the participant's employment role. Participants in all positions found the barriers to be more severe than the handicapped students and the persons engaged in transporting the handicapped.

From an analysis of the participants' handicapping conditions (orthopedic, deaf/hearing impaired, sight impaired, respiratory, blind and no handicapping condition), it was found that 70% of the orthopedically handicapped participants considered only one barrier to be severe: "Lack of knowledge of what students can do resulting in negative attitudes toward the limitations of the handicapped students."

When the participants' responses concerning the feasibility of implementing recommendations to remove barriers were compared to the handicapped students responses, in all but five of 351 recommendations there were no significant differences between the groups. Four of the five differences were found in the section, "Barriers Within the Handicapped Person, Their Families and Other Advocates". The students believed the recommendations were more feasible than the participants.

Twenty-nine identified tasks which might be implemented by community colleges, agencies or advocates for the handicapped, or be used for policy formulation are presented in the Conclusions section which follows. The 29 tasks resulted from a content analysis and distillation of 351 recommendations which had evolved from the 198 identified barriers. Eighteen barriers were identified by a majority (66%) of the participants as being most severe. Fourteen of the twenty-nine tasks correlate with these barriers.

Conclusions

Since all of the findings obtained from the policy focus Delphi Rounds were considered results of the study, it is difficult to present a detailed summary of the conclusions. However, in addition to the identification of the most severe barriers which impede successful completion of vocational technical programs at the post-secondary level by handicapped individuals, and recommended tasks to remove these barriers, several conclusions can be drawn from the study.

1. Seven criteria regarding the successful completion of vocational technical programs by the handicapped were identified by the steering committee and rated by participants.

Each criterion, considered separately, was believed to indicate successful completion of a program. The criterion selected by 48 of the 72 participants as the most indicative of successful completion of vocational technical programs was "acquisition of sufficient job skills to become successfully employed."

2. Based on the data collected, "experts" who had knowledge of handicapped students in post-secondary programs indicated that there were numerous barriers which the handicapped encounter and that these barriers are both broad and specific in nature.
3. After analyzing responses of participants by employment, it was found that handicapped students and the participants engaged in the transportation of the handicapped considered the barriers to be less severe than did the other participants of the study, and the orthopedically handicapped did not find the barriers as severe as other participants with other disabilities or with no disabilities identified.
4. In only five instances, participants and consumers rated the feasibility of implementing recommendations to remove barriers differently; therefore, the populations were considered congruent.
5. Based on the results of the literature review and the findings of the study, twenty-nine tasks were identified as those needing to assist handicapped students in

entering and completing vocational technical programs in the community colleges in Texas. Although some of these tasks are currently being implemented, and policies have been formulated in some areas, the results of the study indicated that there is need to continue to improve and increase whatever efforts exist. The identified tasks are considered a major yield of the study and are presented in Table XII with a suggested rating of desirability, feasibility, and cost effectiveness for each task. The tasks are in rank order according to the number of recommendations which were identified as those supporting the task. Fourteen of these 29 tasks are to be considered as priority tasks and are thus recommendations.

Recommendations

Recommendations for this study have evolved from the data collected through the Delphi study. These recommendations are also supported by other research which was cited in the review of literature section of this report. Additional tasks were recommended for research and development beyond those identified by participants.

Priority Tasks to Be Implemented

An analysis of the identified tasks compared to barriers which were rated as most severe was conducted. Fourteen of the twenty-nine tasks were found to be related to the eighteen barriers which were rated by at

TABLE XII

FINAL RATINGS OF DESIRABILITY, FEASIBILITY AND COST EFFECTIVENESS OF PERFORMING TASKS TO REMOVE BARRIERS

Key to ratings:

Desirability:	Feasibility:	Cost Effectiveness:
1 - very desirable	1 - definitely feasible	1 - very cost effective
2 - desirable	2 - possibly feasible	2 - possibly cost effective
3 - undesirable	3 - possibly unfeasible	3 - possibly not cost effective
4 - very undesirable	4 - definitely unfeasible	4 - definitely not cost effective

General Tasks to be Performed	Number of Recommendations Related to Task	Rating of Desirability to Perform Task	Rating of Feasibility to Perform Task	Rating of Cost Effectiveness for Performing Task
1. Provide for improved and increased counseling services.	48	1	1	1
2. Establish inservice programs for the vocational technical and academic community college personnel.	42	1	1	1
3. Secure funding to provide for programs, services, facilities and equipment.	26	1	1	1
4. Provide resource persons and support services to assist instructors and students.	24	1	1	1
5. Plan for individual students.	24	1	1	1
6. Provide special materials or programs to accommodate handicapped.	22	1	1	2
7. Conduct public education regarding the needs of the handicapped utilizing the news media.	16	1	1	1
8. Provide individualized instruction with planned scope and sequence of curriculum and open entry/exit points for students.	14	1	1	1
9. Conduct research in areas of needs assessment, employment, materials, and equipment.	12	1	2	2
10. Provide pre-service training and teacher preparation in colleges and universities.	12	1	1	1
11. Coordinate services with employers in business and industry.	10	1	2	1
12. Obtain special or adapted equipment.	10	1	2	2

Table XII - Continued

General Tasks to be Performed	Number of Recommendations Related to Task	Rating of Desirability to Perform Task	Rating of Feasibility to Perform Task	Rating of Cost Effectiveness for Performing Task
13. Improve communication and coordination of services between vocational technical programs and agencies.	10	1	2	1
14. Obtain legislative support.	9	1	1	1
15. Enlist improved and increased services from the Texas Rehabilitation Commission.	8	1	2	2
16. Provide for increased interaction between handicapped and non-handicapped students.	8	1	1	2
17. Develop a centralized system of resources.	7	1	1	2
18. Identify instructors' responsibilities for handicapped students.	6	2	2	2
19. Provide special materials and curriculum.	6	1	2	2
20. Develop policies to provide programs and assistance for the handicapped.	5	1	1	2
21. Develop administrative planning for the handicapped.	4	1	2	2
22. Expand and develop programs of vocational education.	4	1	2	2
23. Develop career information for the handicapped.	4	1	1	1
24. Articulate community college vocational technical programs of instruction with public schools.	4	1	1	1
25. Solicit assistance from the community	4	2	2	2
26. Teach handicapped students to communicate problems and use resources available.	3	2	2	1
27. Develop a method of accountability.	1	1	1	1
28. Develop programs for deaf students.	1	2	2	2
29. Establish advocacy groups.	1	2	2	2

least 66% of the participants as being very severe or moderately severe. The eighteen barriers considered most severe are presented in Table XIII. The fourteen tasks which relate to these barriers are presented in Table XIV, page 184. It is recommended that the fouteen tasks presented be considered as priority tasks to be implemented since each is related to one or more barriers considered most severe.

Additional Tasks

Based upon the involvement in this study, additional tasks beyond those identified by participants of the study are recommended for additional research and development:

1. Conduct a needs assessment to determine the numbers of handicapped persons in the state who might benefit from community college vocational technical education.
2. Continue with statewide and regional meetings to assist handicapped students in successfully entering and completing vocational technical programs of instruction similar to the workshop conducted in May, 1978.
3. Implement a plan whereby agencies responsible for the handicapped such as the Texas Education Agency, and the Texas Rehabilitation Commission could coordinate efforts and resources.

Table XIII

BARRIERS RATED MOST SEVERE BY 66% OR MORE OF RESPONDENTS

Barrier Number	Barrier	Percent of Participants Selecting Barrier
30	Lack of programs to prepare post-secondary instructors to teach the handicapped.	78.0%
23	Lack of orientation to receptive expressive language deficiencies and the need for specialized language instruction.	73.3%
34	Lack of counseling and teaching skills needed to accommodate the handicapped student's uniqueness.	72.9%
24	Lack of general knowledge of the handicapped and handicapping conditions.	72.8%
71	Lack of funds to provide for special expenses such as special equipment.	71.9%
31	Instructors inadequately trained in techniques to assist the handicapped student to adapt standard procedures to meet his requirements.	71.7%
27	Inadequate staff preparation and orientation toward working with handicapped students in the area of various learning modalities.	71.7%
15	Lack of knowledge of what students can do resulting in negative attitudes toward the limitations of the handicapped student.	71.2%
85	Lack of realistic counseling and goal setting.	69.0%
87	Inadequate prevocational exploration background information and exposure to the world of work.	68.4%
67	Lack of adaptable equipment that will facilitate teaching the handicapped.	68.4%
132	Employers are unwilling to accept handicapped persons in their employ due to lack of sufficient information regarding handicapping conditions.	67.9%
23	Inadequate orientation of non-handicapped students as to how they may better understand and assist handicapped students.	67.8%
134	Buildings are inaccessible because they are not barrier free (housing for students).	66.7%
32	Lack of knowledge of and sensitivity to handicapping conditions in planning, implementing, and evaluating instruction and vocational learner outcomes.	66.1%
88	Lack of adequate evaluation and diagnosis before making career decisions.	66.1%
12	Lack of skilled interpreters for the deaf in all classes including vocational technical classes.	66.0%
82	An unwillingness on the part of the academic community at the Administrative and Board level to aggressively research the needs of the handicapped in their district--low budget priority.	66.0%

Table XIV

PRIORITY TASKS TO BE IMPLEMENTED

Task Number	Task	Related Barriers
2	Establish inservice programs for the vocational technical and academic community college personnel.	30, 34, 24, 31, 27, 15, 85, 32, 12
10	Provide pre-service training and teacher preparation in colleges and universities.	30, 28, 15, 87, 82
3	Secure funding to provide for programs, services, facilities and equipment.	71, 67, 134
1	Provide for improved and increased counseling services.	48, 85, 88
20	Develop policies to provide programs and assistance for the handicapped.	30, 12
4	Provide resource persons and support services to assist instructors and students.	31
7	Conduct public education regarding the capabilities and needs of the handicapped utilizing the news media.	132
9	Conduct research in areas of need assessment, employment, materials and equipment.	82
11	Coordinate services with employers in business and industry.	132
13	Improve communication and coordination of services between vocational technical programs and agencies.	88
14	Obtain legislative support.	34
16	Provide for increased interaction between handicapped students.	23
17	Develop a centralized system of resources.	67
23	Develop career information for the handicapped.	87

REFERENCES

Administrative guide and handbook for special education, Bulletin 711, Austin, Texas: Texas Education Agency, March, 1973.

Allen, Bob, Director, Adult and Continuing Education, Texas Education Agency, Personal Interview, December, 1977.

Bayne, G. Keith, Turner, Kenne G., and Jackson, Rebecca D., Final Report: An assessment of vocational education needs of the disadvantaged and handicapped in Kentucky. Louisville, Kentucky: Department of Occupational and Career Education, July 1, 1977.

Berkowitz, Monroe, Rubin, Jeffrey, and Worral, John D., Economic concerns of handicapped persons. The white house conference on handicapped individuals, Volume One: Awareness papers. Washington, D. C.: U. S. Government Printing Office, 1977.

Biehl, G. Richard, Guide to Section 504 self evaluation. Washington, D. C.: National Association of College and University Business Officers (NACUBO), 1978.

Bilovsky, David and Matson, Jane. The mentally retarded: A new challenge. Community and Junior College Journal, March 1974.

Browning, Jim. "Division of career and continuing education in-place capabilities for serving the adult handicapped." Project report. Los Angeles, California: Los Angeles City Unified School District, March, 1978.

"Challenge and a Choice, A" (Brochure). Austin, Texas: Texas Education Agency, Department of Occupational Education and Technology, 1978.

Compact Edition of the Oxford English Dictionary, The. Oxford University Press, 1971.

COPES Service Center. Guide: Community college occupational programs evaluation system, 1976-77. Los Altos Hills, California: COPES

Davis, D. A., and Onyemelukwe, O. I. Unique problems of the handicapped aging. The white house conference on handicapped individuals, Volume One: Awareness papers. Washington, D. C.: U. S. Government Printing Office, 1977.

Delbecq, Andre L., Van de Ven, Andrew H. A group process model for problem identification and program planning. In Johnston, A. P. and McNamara, James F. Planning respective for education. New York: MSS Information Corporation, 1975.

Delbecq, Andre L., Van de Ven, Andrew H. and Gustafson, David H. Group techniques for program planning: A guide to nominal group and Delphi processes. Dallas, Texas: Scott, Foresman, and Company, 1975.

Erlund, Othiel J. A forecast of critical tasks for the role of planning and evaluation specialists in Texas regional education service centers. Unpublished doctoral dissertation, Texas A&M University, 1975.

Fabac, John N., "An interim report on the programs and services available to handicapped students enrolled in Illinois community colleges." Urbana, Illinois: Bureau of Educational Research, University of Illinois, February, 1978.

Federal Register, Volume 35, No. 5, October, 1970.

Federal Register, Volume 42, No. 86, May 4, 1977.

Federal Register, Volume 42, No. 163, Part II, August 23, 1977.

Florida State Advisory Council on Vocational and Technical Education. Accessibility of buildings and facilities to the physically disabled. Tallahassee, Florida: Florida State Advisory Council on Vocational and Technical Education, October, 1977.

Gold, Ben K., Director of Research. Student Accountability Model (SAM): operations manual. Sacramento, California: California Community Colleges, Chancellor's Office, February, 1977.

Grusy, William, Director of Post-Secondary Occupational Education and Technology, Texas Education Agency, Personal Interview, December, 1977.

Grusy, William, Director of Post-Secondary Occupational Education and Technology, Texas Education Agency, Personal Interview, May, 1978.

Harkins, Judy (Athey), Project Coordinator. Final report of the statewide feasibility study of post-secondary education for deaf people in Maryland. Columbia, Maryland: Howard Community College, March 15, 1978a.

Harkins, Judy (Athey), Coordinator, "Statewide plan for occupational programs and services for handicapped students in Maryland community colleges: Summary, Advisory Committee Meeting, May 23, 1978." Anapolis, Maryland: Maryland State Board for Community Colleges, May 23, 1978b.

Haynie, James, Director of Post-Secondary Occupational Education and Technology, Personal Interview, April, 1974.

Health, Education and Welfare, U. S. Department of. "Section 504 of the Rehabilitation Act of 1973, Fact Sheet." Washington, D. C.: Office of the Secretary for Civil Rights, July, 1977.

Hessler, John. College education for the severely disabled. American Rehabilitation, May - June, 1976, pp. 29-33.

Hoyle, John R. and Connor, Glenn M. The superintendent as vocational administrator: Administrative task and function. Journal of Industrial Teacher Education, Fall 1977, Vol. 15, No. 1.

Isaac, Stephen and Michael, William B. Handbook in research and evaluation. San Diego, California: Robert Knapp, 1974.

Illinois, Department of Adult, Vocational, and Technical Education. The Illinois network of exemplary occupational education programs for handicapped and disadvantaged students. Chicago, Illinois: Department of Adult, Vocational, and Technical Education, Illinois Office of Education, 1977.

Kelley, Catherine H. The development of individualized supportive services for physically and sensorially limited adults at a post-secondary area vocational school. Final Report. Waco, Texas: McLennan Community College, June, 1977.

Kerlinger, Fred N. Foundations of behavioral research. New York: Holt, Rinehart and Winston, Inc., 1967.

Kitt, Wendy, Schuster, Lois, and Rapp, Nancy. Epilepsy, a second look. Cresaptown, Maryland: Allegany Resource Center. Western Maryland Vocational Research Center, June, 1977.

Kumar, Vasant. Handicapped persons in Wisconsin's vocational, technical and adult education districts: Assessment of educational techniques and identification of barriers. Madison, Wisconsin: Wisconsin Vocational Studies Center, University of Wisconsin, July, 1977.

Lawrence, Richard E., Krieger, George W., and Barad, Cary B. Rehabilitation concerns of the handicapped college student. Rehabilitation Research and Practice Review. Fayetteville, Arkansas: The Arkansas Rehabilitation Research, Summer 1972.

McNamara, James F. Trend impact analysis and scenario writing: Strategies for the specification of decision alternatives in educational planning. The Journal of Educational Administration. October, 1976, Vol. XIV, No. 2.

Resource Center for the Handicapped. "San Diego community college district: Comprehensive plan, programs and services for disabled." San Diego, California: Resource Center for the Handicapped, May 1, 1977.

Roberts, Janet and Brown, Bruce. "Second interim report: Physically disabled students placement project, an innovative services demonstration project for severely disabled persons." Sacramento, California: Research Section, California State Department of Rehabilitation, October, 1976.

Rothman, Leslie K. The community college and rehabilitation. Rehabilitation Counseling Bulletin. American Rehabilitation Counseling Association, March, 1968.

Sause, E. F. Demonstrating competency as a principal. NASSP Bulletin, September, 1974.

Schneps, Jack A., and Slater, Frances. Responding to the needs of the handicapped: Two year college strategies workshop/conference. New York City, New York: Center for Advanced Studies in Education, the Graduate School and University Center, City University of New York, September, 1974.

Schwartz, Stuart E. Final Report: Research and development of instructional booklets for vocational education for mainstreaming the handicapped: Another step forward. Gainsville, Florida: College of Education, University of Florida, March, 1978.

Shworles, Thomas R. The community college system: A resource for rehabilitation. American Rehabilitation. Washington, D. C.: National Rehabilitation Association, May - June, 1976.

Shworles, Thomas R. Guidelines for program operation: A focus on principals. Proceedings of the disabled student on American campuses: Service and the state of the art. Washington, D. C.: U. S. Government Printing Office, August, 1977.

Smith, Ronald E., Editor. Operational guideline: Programs for the handicapped. Sacramento, California: California Community Colleges, Chancellor's Office, Fall, 1977.

Spencer, Sylvia S. Disabled students enrolled in California community colleges, 1974-75: Resource study. Sacramento, California: Occupational Education Division, California Community Colleges, Chancellor's Office, June, 1977.

Stake, Robert E. The case study method in social inquiry. Educational Researcher, February, 1978, 7 (No. 2).

Status report of general special programs, Texas Rehabilitation Commission. Austin, Texas: Texas Rehabilitation Commission, FY 1976.

Suburban Hennepin County Area Vocational/Technical Centers. Site visit, March 15, 16, 1978.

Sullivan, Barbara, Program Specialist. Chancellor's Office, California Community Colleges, Telephone interview, July, 1978.

Summary of 1975-76 COPES activities: Identification of strengths and weaknesses in occupational education. *Community College Occupational Programs Evaluation System.* Los Altos Hill, California: COPES Service Center, October, 1976.

Tetzleff, Mary, Project Director. *S.O.S., success oriented service.* River Grove, Illinois: Triton College Press, August, 1976.

Thiemann, Francis C. and Borkosky, Carl L. *Designing and testing Ariole, a planning guide.* Management Utilizing Staff Training (MUST) Program. Eugene, Oregon: University of Oregon, August, 1973.

Turoff, Murray. The design of a policy Delphi. *Technological Forecasting and Social Change*, Vol. 2, 1970.

Vocational and technical education selected statistical tables, Fiscal Year, 1975. Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education, Bureau of Occupational and Adult Education, 1976.

Whitcraft, Carol J., and Hamm, George. *Cost, type and efficacy of proprietary vocational training in a metropolitan area.* Research Report. Austin, Texas: Texas Rehabilitation Commission, August, 1975.

Wiig, Elizabeth. The emerging LD crisis. *Journal of Rehabilitation.* Vol. 38, 3, May - June, 1972, pp. 15 - 17.

APPENDIX A: CORRESPONDENCE TO STATE DEPARTMENTS OF EDUCATION

For discussion of the information in Appendix A see page 23.

TEXAS A&M UNIVERSITY
COLLEGE OF EDUCATION
COLLEGE STATION TEXAS 77843

March 1, 1978

CENTER FOR CAREER
DEVELOPMENT AND
OCCUPATIONAL PREPARATION

EXAMPLE

Merle R. Bolton
Commissioner of Education
Kansas State Department of Education
120 East 10th Street
Topeka, Kansas 66612

Dear Sir:

The Texas Education Agency and Texas A&M University are conducting a study to develop techniques and procedures to enable the handicapped student to succeed in community college vocational education programs in Texas. The primary objective of the study is to improve the quality of vocational technical education for the handicapped student in the community college in Texas by establishing the criteria for the successful completion of the vocational technical program and by identifying barriers which inhibit enrollment and/or completion of such programs.

Although we plan to conduct an ERIC search for similar research, we would like to obtain any information regarding research studies which have been conducted in your state. If possible, could you mail us the research report, or an address of where the report might be obtained? Since this is the first study of this nature to be conducted in Texas we are very much in need of information regarding similar studies conducted in other states. In exchange, we would be glad to send you a copy of our completed study upon request. If such research has not been conducted in your state, we would like to have this information too.

Thank you very much for any help you might give us.

Sincerely,

Joan Jernigan

Joan Jernigan
Principal Investigator

JJ/sp

APPENDIX B: STEERING COMMITTEE SELECTION AND MEETING

Steering Committee Selection

Letter to Steering Committee

A Study to Develop Techniques and Procedures to Enable the Handicapped Student to Succeed in Community College Vocational Education Programs

Abstract

Responses Regarding Criteria for Successful Completion of Vocational Programs

Barriers Identified by Steering Committee

Minutes of Meeting

For discussion of the information in Appendix B see pages 65 and 68.

STEERING COMMITTEE SELECTION

Types of Persons Selected for Steering Committee	Relationship to Vocational Programs for Handicapped Community College Students	Steering Committee Members	Source of Recommendation
Handicapped students from the vocational technical programs	Users of services of vocational programs at the community college	Freddie Nyland (Student) Austin Community College Austin, Texas	David Burks, Counselor Texas Rehabilitation Commission Austin, Texas
		Larry Smith (Student) San Antonio College San Antonio, Texas	Lynn Hill, Project Director for the Handicapped San Antonio College San Antonio, Texas
Secondary Education Personnel	Largest feeder system which refers students to community college vocational programs	Bettye Lacy, Assistant Superintendent Fort Sam Houston I.S.D. San Antonio, Texas	Eleanor Mikulin, Consultant Division of Special Education Texas Education Agency Austin, Texas
		Rue Tillery, Vocational Adjustment Coordinator Fort Sam Houston I.S.D. San Antonio, Texas	Bettye Lacy, Assistant Superintendent Fort Sam Houston I.S.D. San Antonio, Texas
Community College Vocational Director(s) or Deans	Persons responsible for the administration of programs at the local level	Jamieson H. B. Newell Director, Occupational Education and Technology San Antonio College San Antonio, Texas	Ray Barber, Assistant Director Occupational Research and Development Division of Occupational Education and Technology Austin, Texas
		Howard Duhon, Assistant Dean, Occupational Education and Technology Lee College Baytown, Texas	Ray Barber, Assistant Director Occupational Research and Development Division of Occupational Education and Technology Austin, Texas

STEERING COMMITTEE SELECTION, continued

Types of Persons selected for Steering Committee	Relationship to Vocational Programs for Handicapped Community College Students	Steering Committee Members	Source of Recommendation
Community College Vocational Program Instructors	Persons directly responsible for the instructional programs	Paul Clayton, Chairman Jewelry Instruction Occupational Education and Technology Paris Junior College Paris, Texas	William L. Hindman, Dean Applied Sciences Instruction Paris Junior College Paris, Texas
		Troy Williamson, Placement Occupational Education and Technology Paris Junior College Paris, Texas	William L. Hindman, Dean Applied Sciences Instruction Paris Junior College Paris, Texas
		Gilmore Williams, Instructor Austin Community College Austin, Texas	Bill Scott, Director Vocational Technical Education Austin Community College Austin, Texas
Project Directors of Pilot Projects Sponsored by Texas Rehabilitation Commission	Facilitators of programs for handicapped students in community colleges in Texas	Elizabeth Fetter, Project Director for the Handicapped Eastfield College Mesquite, Texas	Ron Trull, Program Specialist College and University Programs Texas Rehabilitation Commission Austin, Texas
		Sue Yoselow, Project Director for the Handicapped El Centro College Dallas, Texas	Ron Trull, Program Specialist College and University Programs Texas Rehabilitation Commission Austin, Texas
		Lynn Hill, Project Director for the Handicapped San Antonio College San Antonio, Texas	Ron Trull, Program Specialist College and University Programs Texas Rehabilitation Commission Austin, Texas
Post Secondary Teacher Educator	Teacher trainers who provide instructional techniques for vocational educators	Paul Lindsay Vocational Teacher Educator Southwest Texas St. Univ. San Marcos, Texas	Selected because of experience in providing instruction for post-secondary vocational educators

STEERING COMMITTEE SELECTION, continued

Types of Persons Selected for Steering Committee	Relationship to Vocational Programs for Handicapped Community College Students	Steering Committee Members	Source of Recommendation
Texas Education Agency Department of Special Education Consultant	State agency personnel who provide consultative service to the state's educational factilities	Eleanor Mikulin, Consultant Division of Special Education Texas Education Agency Austin, Texas	Don Partridge, Associate Commission for Special Education Texas Education Agency Austin, Texas
Texas Education Agency Department of Occupational Education and Technology Consultant	Administrators of community college vocational programs at the state level	Roland A. H. Benson Post-Secondary Programs Occupational Education and Technology Texas Education Agency Austin, Texas	Bill Grusy, Director Post-Secondary Programs Occupational Education and Technology Texas Education Agency Austin, Texas
College Coordinating Board Representative	Administrators of academic areas of study which are sometimes part of the vocational technical program	Stanton Calvert College Coordinating Board Division of Community and Continuing Education Austin, Texas	David Kelley, Director College Coordinating Board Austin, Texas
Community College Manager of Student Services	Administrators of Student Services for the Handicapped	Curtis Tom Liston Manager of Student Services Texas State Technical Inst. Waco, Texas	Clay Johnson, Vice President for Instruction Texas State Technical Inst. Waco, Texas
Texas Rehabilitation Commission Representative	Users of Community College vocational classes or training facilities for handicapped clients	Ron Trull, Program Specialist College and University Program Texas Rehabilitation Comm. Austin, Texas	Carol Whitcraft, Operations Director Texas Rehabilitation Commission Austin, Texas
National Consultant	An expert who can provide a perspective of national efforts to provide appropriate education for the handicapped	William Henderson, Vice President Management Services Asso. Austin, Texas	Bob Mallas, President Management Services Asso. Austin, Texas

TEXAS A&M UNIVERSITY
COLLEGE OF EDUCATION
COLLEGE STATION, TEXAS 77843

CENTER FOR CAREER
DEVELOPMENT AND
OCCUPATIONAL PREPARATION

As discussed with you by telephone, the Research Coordinating Unit, Department of Occupational Education and Technology, Texas Education Agency, has provided funds to Texas A&M University to conduct a research study which is designed to identify techniques and procedures that enable handicapped students to succeed in vocational education programs in community colleges. The research design calls for the assistance of a steering committee composed of representatives from agencies and institutions who are providing educational services to handicapped post-secondary students. We are pleased that you have accepted the invitation to serve on this important committee for this study. The initial meeting will be held on February 10, 1978 from 10:00 AM to 2:00 PM at the Holiday Inn South, Austin, Texas.

The membership of the committee will be representatives from the following agencies and institutions:

- Division of Special Education, Texas Education Agency
- Division of Occupational Education and Technology
- Texas Rehabilitation Commission
- College Coordinating Board
- Post-Secondary Teacher Training Institutions
- Community College Vocational Directors
- Community College Vocational Instructors
- Directors of Pilot Projects from Community Colleges
- Secondary Education Personnel
- Handicapped Students in Post-Secondary Vocational Programs.

A national consultant, William H. Henderson, Vice President, Management Services Associates, Inc., who has served as a former program consultant for the National Easter Seal Society for Crippled Children and Adults and as Executive Director of the Dallas Rehabilitation Institute will also be a member of the steering committee.

A tentative agenda is included. Please note that you will be requested to suggest three to five people who are familiar with community college vocational programs who can help identify what assistance handicapped students need to successfully learn vocational skills, and who can identify current barriers in community colleges which keep handicapped students from enrolling in and completing vocational programs. Please bring these names with addresses and telephone numbers to the meeting on February 10. This will enable us to begin mailing out requests for their responses as early as February 15.

We are looking forward to meeting with you on February 10. This should be an eventful meeting, since it is the first effort in the State of Texas to focus on the community college vocational program for the benefit of handicapped students.

Sincerely,

Donald L. Clark	Joan Jernigan
Project Director	Principal Investigator

Travel Expenses: Actual expenses up to the established state travel allowance per diem rates ($30.00 per day, 18¢ a mile) will be available for steering committee members. Receipts are required, and the mileage will be taken from the Texas Mileage Guide.

AGENDA

Steering Committee for Study: A Study to Develop Techniques and Procedures to Enable the Handicapped Student to Succeed in Community College Vocational Education Programs.

I. Introduction to Study and Overview
II. Determining emphasis of study relative to specialist-initiated tasks and mandated tasks
III. Selection of respondents who will participate in the study (40-50)
IV. Recommendations for contacting respondents
V. Recommendations for improving the study

Persons Recommended as Participants of Study.

1.

2.

3.

4.

5.

ABSTRACT

TITLE OF PROJECT	A Study to Develop Techniques and Procedures to Enable the Handicapped Student to Succeed in Community College Vocational Education Programs
APPLICANT ORGANIZATION:	Texas A&M University
PROJECT DIRECTOR:	Donald L. Clark
PRINCIPAL INVESTIGATOR:	Joan S. Jernigan
DURATION OF PROJECT:	January 1, 1978 - September 30, 1978

PROBLEM

Leaders in education and rehabilitation are becoming increasingly aware of the importance of the community college system in the comprehensive vocational training facilities for the handicapped. However, at the present time there is no clearly identified compilation of techniques and procedures which make it possible for handicapped persons to succeed in community colleges and thus receive occupational training that enables them to function at their full potential. The academic barriers which exist are even more serious than the obvious problem of architectural barriers.

OBJECTIVES

The primary objective of the proposed study is to improve the quality of vocational technical education for the handicapped student in the community college in Texas by establishing criteria for the successful completion of the vocational technical program and by identifying barriers (other than architectural) which inhibit enrollment or completion of such a program. State agencies would receive a report summarizing ways to remove these barriers, and administrators, counselors, and teachers, responsible for the student's education, would receive a guide which would help them improve vocational programs for handicapped students.

PROCEDURES

Critical tasks needed to accommodate handicapped students will be identified by utilizing the Delphi Technique and a steering committee. Three recently enacted public laws will serve as references and for definitions of handicapping conditions: P.L. 94-482, P.L. 93-112, and P.L. 94-142. The study will enlist the assistance of persons who are knowledgeable in the field of vocational education for the handicapped at the community college level.

RESULTS AND BENEFITS OF THE STUDY

This study will benefit handicapped persons who hope to complete vocational programs at the community college level. This study will provide counselors, vocational technical teachers and administrators critical information on the most successful approaches for accommodating persons with handicaps. The results of the study will also assist community colleges in meeting the intent of recently enacted public laws.

INDIVIDUAL STEERING COMMITTEE RESPONSES REGARDING CRITERIA FOR SUCCESSFUL COMPLETION OF PROGRAM OF VOCATIONAL EDUCATION BY HANDICAPPED COMMUNITY COLLEGE STUDENTS

1. Success is being able to live a productive, self sufficient life in today's society. (Education in a given skill may prepare a student to cope better with changes in employment. A degree, as such, seems to be unimportant.) A degree may be unobtainable but the skills acquired by the individual will remain the important point.

2. Success is being economically self supporting.

3. Success is completing a program of vocational training that will allow the student to realistically compete in the job market with non-disabled individuals with similar training. This training should be in line with the student's total needs.

4. Success is being educated or trained enough to earn a living with dignity. Expansion: to earn a living from an employer who hires many people and therefore the handicapped compete. Success means a handicapped person's training must be at least as good or better than a non-handicapped person's. In essence, the employer must be satisfied that the employee is capable and can earn money for the employer. The worker must be satisfied with his/her work.

5. Success means completing training in the skill(s) selected and academics required.

6. Success means a person has completed an AA degree at a community college program or has taken all of the courses in a program, has secured a job and has held the job for six months.

7. Success means completing training and finding and surviving in a job.

8. Success means being personally satisfied.

9. Successful completion occurs when a person determines his or her goals have been met. Perhaps one of the greatest barriers we can construct is for others to establish the criteria of success for individuals who either cannot or do not desire to pursue those goals. I strongly believe that we should pursue the idea of self fulfillment and avoid the emphasis on economic measurement.

10. Successful completion of a program is an individual matter; not all individuals have the same goals (handicapped or not). It is possible that success means being appropriately employed. Success means the ability to function successfully in an economic society. Success may possibly mean fulfilling the goals of learning a skill or studying other areas (of knowledge). For most students, successful completion means completing the program with subsequent appropriate (pay, advancement, etc.) employment.

11. Success means that the student has reached his/her vocational goals to enable him/her to live his/her life to the fullest.

12. Success means completing an individualized program of study (program defined by the student and professional(s), the content of which would include the vocational/technical, academic, conceptual and affective skills requisite for realistic employment for the student.

13. Successful completion of a vocational program at the post-secondary level by a handicapped person takes place when that person meets his/her goals and can proceed on whatever course he/she feels is best. For some it may be a degree, for others a certificate, for others the skills necessary for employment. A program might be successful if the person determines that the selected vocation is not what they really want, and they are able to change.

14. Success is when the handicapped student masters the course requirements or the entire program curriculum (as a regularly enrolled student).

15. A person should be as well equipped as is individually possible to compete successfully in the job market. Whether the person gets a degree or not is unimportant. However, if the person has the ability and the desire to go for a degree he or she should be encouraged to do so just as anyone else would be.

16. Success means 1) graduating, 2) completing skill training courses, 3) securing employment in the area for which trained, 4) selecting appropriate field of study in the light of external requirements of jobs and 6) being personally satisfied and successful in the field for which the person prepared.

17. Success means being employed to the maximum potential, i.e., if he has the ability to make $5.00 an hour, and makes $2.50, he is not successfully employed. We cannot get into the trap of "employment" along being the criteria for success.

BARRIERS IDENTIFIED BY STEERING COMMITTEE

Barriers Rated Very Severe	Barriers Rated Moderately Severe	Barriers Rated Severe
Transportation: 1) on large campuses handicapped persons need the means to go from class to class, 2) because of architectural barriers, there is a need to relocate classes away from the established lab or shop, thereby losing the use of some learning aids and equipment.	Instructional materials and classroom design (need to adapt materials to allow use by handicapped--this would vary with handicap).	Testing, such as entrance and aptitude tests.
Attitudes of people: a) handicapped persons themselves (too dependent, too independent, etc.) b) Parents of handicapped (too protective, too optimistic, unrealistic goals for son/daughter) c) Agency people, such as Rehabilitation Commission (too optimistic, too pessimistic about the abilities of the handicapped person, bureaucratic limitations) d) College staff (afraid of handicapped, see them as "different", too demanding, not demanding enough, sympathetic) e) Employers/Industry	Financial barriers: lack of trained supportive staff to work and provide needed services to the handicapped. Rehabilitation counselors, on-campus coordinators of handicapped services	Communication and coordination of people and organizations among themselves and with handicapped students
Narrow minded career ideas: attitudes of agency people, parents, the student himself, instructors, college counselors and industry are set in traditional stereotypes of placing the handicapped in traditional vocations, i.e. deaf people are good watchmakers.	The instructor's teaching style is incompatible with the student's learning style, i.e., the instructor uses lectures, overheads and essay tests and the student may learn best by demonstration and is best tested by exhibiting skill to the instructor.	The language level of textbooks used in class as well as the language level of instructors and examinations

BARRIERS, continued

Barriers Rated Very Severe	Barriers Rated Moderately Severe	Barriers Rated Severe
Attitudes a) Poor communication often caused by a bad attitude b) Attitude of the student toward self and job c) Attitude of institution (administration and teachers) d) Attitude of employers e) Attitude of "others" who help the students (counselors, state and local)	Facilities--most do not accommodate the handicapped	Occupation--some occupations just cannot be performed by handicapped persons
Need for (equipment such as) a tape recorded to cover what was said in class so that it can be reviewed at home at a slower pace.	Getting information from the places that can help a handicapped student.	
Attitude Teachers lack of understanding of the handicapped and their resistance to accepting the handicapped student in class	Teacher's level of expectations of the student--inflexibility of curriculum	Inflexibility to time allowed to complete the course (3 hours/semester, etc.)
Attitudinal barriers of the teacher and employer	Lack of knowledge of the handicapped and handicapping conditions	Inadequate equipment, materials and supplies and arrangements of facilities at work and in school

BARRIERS, continued

Barriers Rated Very Severe	Barriers Rated Moderately Severe	Barriers Rated Severe
Attitude--i.e., the belief that a person must be able to walk to be a disc jockey in a radio station (without stairs)--any fantasy can become a reality	Physical--need for modification of equipment in training situations and the need to provide modified equipment to potential employers	Social integration--begin early to assist the learning process--provide assistance to obtain educational opportunities (i.e., provide the best person available--a college graduate if needed)
Lack of understanding of what it is to be handicapped	Lack of knowledge of individual curriculum design (instructors)	Lack of known teaching strategies.
Communication problems, deaf students: Problem between the teacher and interpreter (teacher speaks so fast that the interpreter cannot catch up to what the teacher is saying)	Communication problems, deaf students: difficulty in paying attention to interpreter when the teacher is writing on blackboard and it is necessary for the student to take notes also	Communication problems, deaf students: lack of understanding--deaf students have difficulty in understanding language
Human barriers a) Self concept b) relationships with others (parents, teachers, employers, significant others) c) attitudes toward self, teachers, employers d) values	Conceptual barriers a) levels of intelligence; compatibility in relationship of aspirations and requirements of various levels within the occupational area of student's choice b) decision making c) problem solving	Academic barriers: regular curriculum may not be appropriate

BARRIERS, continued

Barriers Rated Very Severe	Barriers Rated Moderately Severe	Barriers Rated Severe
Handicapped individual's initial attitude toward enrolling as a student in a course or program designed for regularly enrolled students	Faculty and staff attitudes toward accommodating and treating handicapped students as equal in intent and purpose as the regularly enrolled students in their courses and programs	The particular educational institution's governing board philosophy and the community responsibility toward the role and scope of the community college or technical institution
Lack of proper evaluation and testing prior to trying to make a vocational training decision (for post-secondary placement)	Unrealistic goal setting by the student and his/her family	Lack of information as to what types of employment are available.

A STUDY TO DEVELOP TECHNIQUES AND PROCEDURES TO ENABLE THE HANDICAPPED STUDENT TO SUCCEED IN COMMUNITY COLLEGE VOCATIONAL EDUCATION PROGRAMS

Minutes:
Steering Committee Meeting
February 10, 1978

Members present were Roland A. H. Benson, Stanton Calvert, Howard Duhon, Elizabeth Fetter, William Henderson, Lynn Hill, Curtis Tom Liston, Bettye Lacy, Paul Lindsay, Eleanor Mikulin, Jamieson H. B. Newell. Freddie Nyland, Larry Smith, Rue Tillery, Ron Trull, Sue Yoselow, Donald L. Clark, and Joan Jernigan. The members absent were Paul Clayton, Gilmore Williams and Troy Williamson.

The initial meeting of the Steering Committee for the study to identify the barriers that impede the successful completion of post-secondary vocational programs by handicapped individuals in Texas was held February 10, 1978, at the Holiday Inn South, Austin, Texas. The focus of the meeting was on the definition of "criteria for successful completion of vocational programs by handicapped students", "barriers" which the handicapped student encounters in his/her efforts to gain vocational skills, and the nomination of persons whom the steering committee felt would be contributing participants/respondents in the study. The Project Director, Donald L. Clark. and Principal Investigator, Joan Jernigan, reviewed the project, the project objectives, and the timelines of the study.

The discussion of the concept of criteria for successful completion of a vocational program revealed many different perspectives such as a person's own satisfaction in terms of his goals, the cost effectiveness of the vocational program of instruction, and the handicapped person's ability to achieve to his potential in terms of income earned for time and effort invested in vocational education. A list of the criteria for successful completion of vocational programs is attached to these minutes.

In the process of identifying barriers, one contribution was made by a member involved in assisting handicapped students at San Antonio College. Lynn Hill explained that the individual case study was an excellent method of identifying and resolving barriers, and that from the individual case, a more general knowledge of barriers and methods of assisting handicapped students followed. Another interesting contribution was that whenever gains are made in assisting the handicapped, there has been an interface person present on campus to help in making the gains.

The information contributed by the Steering Committee members will be utilized in designing the Round One questionnaire of the Delphi study. The Steering Committee meeting was useful also in causing the persons involved to become acquainted with efforts being made on behalf of the handicapped in community college vocational programs in Texas, and in becoming knowledgeable of the increasing numbers of concerned persons involved. The assistance of the steering committee will be invaluable throughout this study.

The following are included with this report:

1. Individual Steering Committee Responses Regarding Criteria for Successful Completion of Program of Vocational Education by Handicapped Community College Students
2. Barriers Identified and Ranked by the Steering Committee

APPENDIX C: CORRESPONDENCE: NOMINATED PARTICIPANTS

Letter - February 18, 1978 with agreement form
Abstract
Letter - March 11, 1978
Objectives of the Study
Steering Committee Members
Definition of Terms
Workshop Agenda

For discussion of the information in Appendix C see pages 68 and 69.

TEXAS A&M UNIVERSITY
COLLEGE OF EDUCATION
COLLEGE STATION TEXAS 77843

February 18, 1978

CENTER FOR CAREER
DEVELOPMENT AND
OCCUPATIONAL PREPARATION

In order to more effectively meet the needs of handicapped vocational students in the State of Texas, Texas A&M University, in cooperation with the Texas Education Agency, Department of Vocational Technical Education, Division of Research, is conducting a study to identify barriers that impede the successful completion of post-secondary vocational programs by handicapped individuals. An abstract of the project proposal is enclosed with this letter.

A steering committee was identified by personnel from appropriate agencies within our state. At a formal meeting of the steering committee your name was identified as a knowledgeable individual who could assist in providing information that would be of benefit to the study. The information gathering technique we will be using is a Policy Delphi Technique. Delphi forecasting and group information gathering techniques are widely used in business and industry for the systematic development of expert opinion consensus. This methodology involves gathering data from a small group of persons who by professional reputation have been identified as "experts".

If you agree to participate, we will send you packets of appropriate materials further explaining the study. During the study you will be provided with edited statements derived from the total panel of respondents, and at the time of completion of the study, you will be provided with a copy of the results. Detailed instructions will be included in each packet of materials. Your participation will entail the following activities:

1. Completion of the Round One Questionnaire (mailed to you).
2. Completion of the Round Two Questionnaire (mailed to you).
3. Attendance at a two day statewide workshop (travel and per diem paid at the rate of 18¢ per mile and $30.00 per day) on May 4 and 5, 1978 in Austin or San Antonio.
4. Completion of the Round Three Questionnaire at the workshop.

The value of the study will depend to a great extent on the participation of the invidiuals nominated by the steering committee - you - and on 100 percent of the questionnaires (called "Rounds") being returned. We would like each person who agrees to assist us to do so in terms of total participation for all three rounds of the Delphic exercise. The completion of each of the three questionnaires should take no longer than 45 minutes to an hour. One of these responses will be requested at the time of a statewide workshop in May. The time schedule given below will help you to determine the planned dates for each mail-out and requested dates for return.

	Mailed to Respondents	Returned by Respondents
Request for agreement to participate	February 18	February 25
Round One	March 15	March 28
Round Two	April 3	April 17
Round Three	Distributed and collected at workshop	
Final Report Mailed	September, 1978	

The workshop will serve two purposes - receiving and sharing information regarding vocational programs for handicapped students in community colleges. The workshop will provide an opportunity for the participants to receive information from experts in the field which will assist them in becoming more effective. The research project will be gaining information from participants as they complete three rounds of the Delphic study. The workshop will consist of a day and a half of 1) presentations by consultants from California, Minnesota and Texas, 2) discussions of vocational programs at the postsecondary level for the handicapped, and 3) reports from state agencies involved in assisting handicapped students to gain vocational skills.

Your qualifications were the basis for your selection and we hope you can be a part of this study. This investigation should provide some of the very best thinking available regarding vocational training for the disabled. The experience is reported to be highly stimulating and interesting by others who have participated in such studies.

Please complete the enclosed form indicating whether you can or cannot participate in both the Delphi study and statewide workshop. Call Joan Jernigan at (713) 845-6816 if you have any questions concerning the study or your participation in it. Your return of the agreement form by March 30 would be greatly appreciated. A stamped, self-addressed envelope is provided. We are looking forward to your involvement with this research.

Sincerely,

Donald Clark
Project Director

Joan Jernigan
Principal Investigator

AGREEMENT FORM

Date ____________________

__________ I am able to participate in the study on the Development of Techniques and Procedures to Enable the Handicapped Student to Succeed in Community Vocational Education Programs.

__________ I do not feel that I will be able to participate in the study.

Name ____

Position ____

Institution or Agency ________________________________

Address ____

Telephone: Office ______________ Home ________________

(Return of this form by March 10 will be greatly appreciated)

ABSTRACT

TITLE OF PROJECT	A Study to Develop Techniques and Procedures to Enable the Handicapped Student to Succeed in Community College Vocational Education Programs
APPLICANT ORGANIZATION:	Texas A&M University
PROJECT DIRECTOR:	Donald L. Clark
PRINCIPAL INVESTIGATOR:	Joan S. Jernigan
DURATION OF PROJECT:	January 1, 1978 - September 30, 1978

PROBLEM

Leaders in education and rehabilitation are becoming increasingly aware of the importance of the community college system in the comprehensive vocational training facilities for the handicapped. However, at the present time there is no clearly identified compilation of techniques and procedures which make it possible for handicapped persons to succeed in community colleges and thus receive occupational training that enables them to function at their full potential. The academic barriers which exist are even more serious than the obvious problem of architectural barriers.

OBJECTIVES

The primary objective of the proposed study is to improve the quality of vocational technical education for the handicapped student in the community college in Texas by establishing criteria for the successful completion of the vocational technical program and by identifying barriers (other than architectural) which inhibit enrollment or completion of such a program. State agencies would receive a report summarizing ways to remove these barriers, and administrators, counselors, and teachers, responsible for the student's education, would receive a guide which would help them improve vocational programs for handicapped students.

PROCEDURES

Critical tasks needed to accommodate handicapped students will be identified by utilizing the Delphi Technique and a steering committee. Three recently enacted public laws will serve as references and for definitions of handicapping conditions: P.L. 94-482, P.L. 93-112, and P.L. 94-142. The study will enlist the assistance of persons who are knowledgeable in the field of vocational education for the handicapped at the community college level.

RESULTS AND BENEFITS OF THE STUDY

This study will benefit handicapped persons who hope to complete vocational programs at the community college level. This study will provide counselors, vocational technical teachers and administrators critical information on the most successful approaches for accommodating persons with handicaps. The results of the study will also assist community colleges in meeting the intent of recently enacted public laws.

TEXAS A&M UNIVERSITY
COLLEGE OF EDUCATION
COLLEGE STATION, TEXAS 77843

CENTER FOR CAREER
DEVELOPMENT AND
OCCUPATIONAL PREPARATION

March 11, 1978

Thank you very much for promptly responding to our letter soliciting your participation on the study of barriers that handicapped students encounter in Texas' Community Colleges, and more particularly, the barriers they encounter in their vocational classes.

You will be receiving the first questionnaire soon. Also, we have almost completed plans for a workshop on May 4 and 5. Project finances will pay for travel, food, and lodging at this workshop. We look forward to meeting you.

So that you may become more familiar with the project, we are including the objectives, the names of the steering committee, definitions of terms, and a tentative agenda for the statewide workshop. A finalized program will be mailed to you by March 30 and at that time we will need information for making reservations for you.

Again, we appreciate your willingness to assist with this study. With your support it can help those who encounter barriers for handicapped students at community colleges.

Sincerely,

Joan Jernigan

Joan Jernigan
Principal Investigator

cc: Donald L. Clark
Project Director

enclosures

OBJECTIVES OF THE STUDY

Objective 1: Identify criteria for successful completion of vocational technical programs by handicapped students at community colleges in Texas, and, as a result, identify services or programs to remove barriers for vocational students with handicapping conditions.

Objective 2: Identify specific barriers (other than architectural within the school setting) which exist in community colleges in Texas in vocational technical programs which would inhibit enrollment or completion of the vocational technical program by the handicapped student.

Objective 3: Identify strategies for implementing findings of the Delphic study in community colleges in vocational technical programs.

Objective 4: Develop a report for state agencies summarizing criteria for successful completion of vocational technical programs at the community colleges in Texas, and recommend services or programs which would remove barriers for vocational students at the community college level.

Objective 5: Develop a guide which can be utilized by administrators, counselors and teachers.

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DEFINITIONS OF TERMS

Barrier: any obstacle which prevents access or produces separation (The Compact Edition of the Oxford English Dictionary, 1971).

Delphic Exercise: eliciting and refining group judgments by drawing upon experts' opinions. Defined by Turoff (1970) as a "method for the systematic solicitation and collation of informed judgments on a particular topic".

Expert: anyone with unique knowledge who can constructively contribute relevant inputs, an experienced specialist (Erlund, 1975).

Handicapped student: for the purpose of this research the definition of handicapped will include definitions from two recent Public Laws, P.L 94-142 and P.L. 94-112, Section 504. The Extension and Revision of the Vocational Act of 1973 (Federal Register, Volume 42, No. 191, October 3, 1977) refers to the definition of P.L. 94-142 (Federal Register, Vol. 42, No. 163, Part II, August 23, 1977)

> 121a.5 Handicapped children.
> (a)s used in this part, the term "handicapped children" means those children evaluated in accordance with 121a.530.121a.534 as being mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multihandicapped, or as having specific learning disabilities, who because of those impairments need special education and related services.

The definition of the handicapped found in P.L. 94-112, Section 504 of the Rehabilitation Act of 1973, (Federal Register, Vol. 42, No. 86, May 4, 1977) appears to be more appropriate for the purpose of defining the handicapped student in post-secondary education.

> Appendix Analysis of Final Regulation: Subpart A--General Provisions. Definitions: 3. "Handicapped persons." Section 84.3(j). . . The definition of handicapped person in paragraph (j)(1) conforms to the statutory definition of handicapped person that is applicable to section 504, as set forth in section 111 (a) of the Rehabilitation Act Amendments of 1974, Pub. L. 93-516.
>
> The first of the three parts of the statutory and regulatory definition includes any person who has a physical or mental impairment that substantially limits one or more major life activities. Paragraph (j)(2)(i) further defines physical or mental impairments because of the difficulty of ensuring the comprehensiveness of any such list. The term includes, however,

> such diseases and conditions as orthopedic, visual, speech and hearing impairments, cerebral palsy, epilepsy, muscular dystrophy, multiple sclerosis, cancer, heart disease, diabetes, mental retardation, emotional illness, and drug addiction and alcoholism.

Since both definitions of the handicapped are legally applicable, both will be included to define the handicapped student at the post-secondary level.

Likert Rating Scale Survey: a series of statements to which the examinee responds by indicating the extent to which he agrees or disagrees with each (Noll and Scannell, 1972). In this study the Likert Rating Scale will include five ratings.

Participants: each member of the steering committee will select three persons and two alternates to become participants, who will react to the questions presented, and complete the rounds of the Delphic exercise.

Steering Committee: a committee of approximately fifteen persons who are responsible for acting in an advisory capacity to the research project. This committee is also known as a user body, and expect some sort of product from the exercise which is useful to their purpose (Turoff, 1970). They are responsible for selection of the participants, and will become a part of the participant group, i.e., they will react to the major questions, complete the priority assessments and submit a rationale for any variations from the mode of responses.

WORKSHOP: DESIGNING PROGRAMS FOR THE HANDICAPPED IN VOCATIONAL EDUCATION AT COMMUNITY COLLEGES IN TEXAS

Objectives:	Activities
1. To identify successful programs which have assisted handicapped students to complete post-secondary vocational education	Persons representing exemplary programs serving handicapped students in vocational classes at the post-secondary level will be invited to serve as consultants.
2. To prioritize solutions to barrier removal. (Solutions to barriers will have been identified in a previous round of the Delphi study.)	Participants will assign priorities to solutions which have been selected to remove or circumvent barriers.
3. To identify training needs of handicapped persons specific to handicapping condition (see handicapping condition)	Consultant will discuss training needs of handicapped persons. Additional information will be duplicated for participants.
4. To identify the components for design of a program at the community college level	Consultants will discuss specific components for programs for the handicapped at the community college level.

Consultants:

Three consultatns have been selected because of their extensive work with handicapped students and adults. Brief summaries of their backgrounds are included here. These consultants have been contacted and have agreed to help with the project.

Barbara Sullivan Specialist in Academic Affairs, Office of the Chancellor, California Community Colleges. Directs the Enabler Program in California Community Colleges. Enablers are employed for the purpose of assisting handicapped persons on these campuses.

Tom Sawyer Director, Special Students Program. Hennipin School District 287, Minneapolis, Minn., Post-Secondary Programs, Vocational Education. Assists in placing handicapped students in post-secondary vocational classes which are taught by utilizing criterion referenced materials.

William Henderson Vice President of Management Services Associates. (Physically handicapped from residuals of poliomyelitis). Formerly Program Consultant for the National Easter Seal Society.

APPENDIX D: ROUND ONE DELPHI STUDY

Letter - March 31, 1978

Round One

Request for Personal Information

For discussion of the information in Appendix D see page 69.

TEXAS A&M UNIVERSITY
COLLEGE OF EDUCATION
COLLEGE STATION TEXAS 77843

CENTER FOR CAREER
DEVELOPMENT AND
OCCUPATIONAL PREPARATION

March 31, 1978

Thank you very much for agreeing to participate in the research project entitled A Study of Barriers Encountered by Handicapped Students Which Impede Successful Completion of Vocational Technical Programs.

You, as a respondent, are being requested to complete three rounds of the Delphi questionnaires. Information obtained will be summarized in a report which will be presented to the Department of Occupational Technology, Texas Education Agency, along with recommendations for removal of barriers which impede the successful completion of vocational programs by handicapped students. Respondents will also receive a copy of the summarized report.

The enclosed first round of this research study is a request for the identification of barriers which impede the successful completion of vocational programs in community colleges by handicapped students.

Barrier locations are found in three broad areas, barriers within society, barriers within the helping system and barriers within the handicapped person, his family and other advocates. Barrier types found in these locations are numerous, some of the following will serve as examples:

Barriers within Society

Inadequate expectations on the part of society

Inadequate support systems such as therapy groups to encourage attendance in school

Barriers within the Helping System

Lack of equipment to provide adaptations to learning, i.e., tools designed or adapted for a cerebral palsy student

Examinations which are sensorily oriented (oral exams which the deaf could not participate in), timed examinations which prohibit adequate answers from a student with a learning disability

Barriers within Handicapped Persons, Their Families and Other Advocates

Personal feelings or inadequate self-worth

Internal orientation and lack of a desire to be among other people

Inadequate knowledge of life skills to successfully perform in vocational training programs.

In order that the identified barriers may be processed to prepare for Round Two of the study, you are asked to return your response by April 10 in the envelope provided.

Sincerely,

Joan Jernigan

Donald L. Clark
Project Director

Joan Jernigan
Principal Investigator

A STUDY OF BARRIERS ENCOUNTERED BY HANDICAPPED STUDENTS WHICH IMPEDE SUCCESSFUL COMPLETION OF VOCATIONAL TECHNICAL PROGRAMS

Delphi Study: Round One

1. Please check the criteria which you feel constitutes successful completion of vocational technical programs by handicapped students in community colleges.

Check one or more:

☐ Completion of an associate degree

☐ Certification in the technical area for which the student is trained

☐ Acquisition of sufficient job skills to become successfully employed

☐ Acquisition of skills to live a productive self-sufficient life

☐ Acquisition of sufficient skills to compete in the world of work with non-disabled individuals with similar training

☐ Sufficient acquisition of skills to meet personal, individual goals

☐ Successful employment to the maximum potential of the person's earning power

☐ Other (Specify) ________________
____

2. Please list types of barriers which you feel prohibit handicapped students from successfully completing vocational programs in the community college. List as many as you like; however, please list a minimum of three. Check the physical or mental impairments affected by the barriers.

Examples of barriers are as follows:

Barrier	Orthopedic	Visual	Speech	Hearing	Cerebral Palsy	Epilepsy	Muscular Dystrophy	Multiple Sclerosis	Cancer	Heart Disease	Diabetes	Mental Retardation	Emotional Illness	Drug Addiction	Alcoholism	Other Physical	Other Mental *
Inadequate knowledge of life skills to successfully perform in vocational training programs.			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Communications problems: Difficulty in paying attention to an interpreter, taking notes and watching the teacher write on the board all at the same time.			x	x													

Begin on Next Page

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*Handicapping conditions listed in Section 504, Rehabilitation Act, Federal Register, Vol. 42, No. 86 -- Wednesday, May 4, 1977

List Barriers:

	Orthopedic	Visual	Speech	Hearing	Cerebral Palsy	Epilepsy	Muscular Dystrophy	Multiple Sclerosis	Cancer	Heart Disease	Diabetes	Mental Retardation	Emotional Illness	Drug Addiction	Alcoholism	Other Physical	Other Mental
1																	
2																	
3																	
4																	
5																	

	Orthopedic	Visual	Speech	Hearing	Cerebral Palsy	Epilepsy	Muscular Dystrophy	Multiple Sclerosis	Cancer	Heart Disease	Diabetes	Mental Retardation	Emotional Illness	Drug Addiction	Alcoholism	Other Physical	Other Mental
6																	
7																	
8																	
9																	
10																	

PERSONAL INFORMATION

NAME ______________________________

ADDRESS ______________________________

____

ORGANIZATION YOU REPRESENT ______________________________

Please answer the following questions pertaining to your association or responsibility for the education of handicapped community college students.

What is your association with handicapped community college students?

- ☐ Handicapped student (self)
- ☐ Teacher/Instructor Subject taught ____________________
- ☐ Teacher trainer Explain ____________________
- ☐ Employed by an agency which serves the handicapped
  Specify the agency ____________________
- ☐ Other Explain ____________________

The following questions pertain to your knowledge of handicapping conditions.

1. Do you have a handicapping condition? Yes No (Circle one)
   Please explain ____________________
2. Do you work directly with handicapped students at present?
   Yes No (Circle one)
3. Are you responsible for educational planning for the handicapped?
   Yes No (Circle one) Please explain ____________________
4. Are you responsible for providing other services to handicapped persons? Yes No (Circle one) Please specify __________
5. About what types of handicapping conditions are you most knowledgeable? ____________________

Please return to: Joan Jernigan
Interdisciplinary Education
College of Education
Texas A&M University
College Station, Texas 77843

APPENDIX E: STEERING COMMITTEE AND PARTICIPANTS

For discussion of the information in Appendix E see page 70.

STEERING COMMITTEE AND PARTICIPANTS

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APPENDIX F: ROUND TWO DELPHI STUDY

Letter - April 20, 1978

Questionnaire

For discussion of the information in Appendix F see page 72.

TEXAS A&M UNIVERSITY
COLLEGE OF EDUCATION
COLLEGE STATION, TEXAS 77843

CENTER FOR CAREER
DEVELOPMENT AND
OCCUPATIONAL PREPARATION

April 20, 1978

Thank you for your participation in the first round of this research, however, if we did not get your response, we would still like for you to respond to this second round. The second round consists of all of the barriers that the participants across the state recognize as impeding the successful completion of vocational programs by handicapped students in community colleges. The barriers have now been grouped under three general classifications: 1) barriers within the handicapped person, their families and other advocates, 2) barriers in the helping system, and 3) barriers within society. Some of the barriers submitted have been reworded or combined with barriers which seemed similar, so because of this, some of the statements may not have the same meaning that you intended. If you think your idea has been misinterpreted, please write the barrier so that the meaning is clear.

It is imperative that this data be returned immediately so that we can use the information to make up the third round of the Delphi questionnaire on April 28 in time for the workshop on May 4 and 5. Instructions for the completion of the questionnaire are at the beginning of the instrument.

We are looking forward to having you participate with us in Austin at the workshop on May 4 and 5. As noted in the letter of invitation, we will be able to reimburse you for travel and per diem.

Thank you very much for your assistance in the completion of this questionnaire.

Sincerely,

Donald L. Clark
Project Director

Joan Jernigan
Principal Investigator

A STUDY OF BARRIERS ENCOUNTERED BY HANDICAPPED STUDENTS WHICH IMPEDE SUCCESSFUL COMPLETION OF VOCATIONAL TECHNICAL PROGRAMS IN COMMUNITY COLLEGES

Instructions: Please read each barrier carefully and rate it according to its severity. The scale used is as follows: Severity - How severe is the barrier in impeding the progress of the handicapped vocational student in community college?

1 -- Very severe 2 -- Moderately severe 3 -- Slightly severe 4 -- Not severe

For each of the barriers that you rate "1 -- very severe, and 2 -- moderately severe", please give a recommendation for the removal of the barrier.

Example:

Barrier	Severity of Barrier	Recommendation for removal
Lack of equipment to provide adaptations to learning, i.e., tools designed or adapted for a cerebral palsy student.	1 [✓ 2] 3 4	Obtain legislative support to increase funding to purchase any equipment necessary regardless of cost.

BARRIERS WITHIN THE HELPING SYSTEM	Severity of Barriers				Recommendation for Removal
	Very severe			Not severe	
Legislation					
1. A general lack of knowledge in the academic community of Section 504 of the Rehabilitation Act of 1973 (25)	1	2	3	4	
2. Social Security Disability Insurance legislation which inhibits initiative to prepare for employment (18)	1	2	3	4	
Planning and Preparation					
3. Inadequate planning on the part of the administrative staff for individual student needs of the handicapped such as students with language barriers (30)(33)	1	2	3	4	

	Very severe			Not severe	Recommendations for Removal
4. General lack of communication between helping agencies and the training institution (25)	1	2	3	4	
5. Too few certified rehabilitation counselors on campuses of the training institution	1	2	3	4	
6. Lack of organizational structures which insure meaningful interaction between handicapped and nondisabled students (14)(26)(24)	1	2	3	4	
7. Poor planning and organization which results in social barriers, i.e., inability to participate in concerts, hear speakers, or attend films (45)(58)	1	2	3	4	
8. Lack of planning for required activities which are difficult for handicapped students such as registration (51)(49)	1	2	3	4	
Personnel: Support Services					
9. Inadequate availability of readers, interpreters, tutors and counselors for handicapped students (6)(21)(8)(27)	1	2	3	4	
10. Lack of funds for support services and staff (i.e., wheelchairs, pushers, attendants, note-takers, interpreters, tutors, etc.) (5)(33)(55)(45)	1	2	3	4	
11. Lack of initial and ongoing mobility orientation (37)	1	2	3	4	
12. Lack of skilled interpreters for the deaf in all classes including vocational technical classes (9)(18)(56)(37)(60)(16)	1	2	3	4	

	Very severe			Not severe	Recommendations for Removal
13. Lack of available qualified tutorial and remedial assistance for people who cannot cope with regular group and classroom procedures (16)(9)(58)	1	2	3	4	
14. Lack of persons to work with the handicapped to give additional training when needed by private business as it relates to specific job needs (8)	1	2	3	4	

Attitudes of Community College Personnel

	Very severe			Not severe	Recommendations for Removal
15. Lack of knowledge of what students can do resulting in negative attitudes toward the limitations of the handicapped students (53)(41)	1	2	3	4	
16. Lack of knowledge and experience on the part of educators that would make them unwilling to hold students to the same standards of performance of non-handicapped students (example: deaf students) (9)(5)(50)(48)	1	2	3	4	
17. Inability on the part of the instructor to empathize instead of sympathsize (18)	1	2	3	4	
18. Lack of self-confidence on the part of teachers to teach handicapped students (34)	1	2	3	4	
19. Lack of understanding and acceptance, and/or indifference toward the special needs of the handicapped on the part of administrators, faculty and staff (14)(33)(11)(7)(16)(51)(39)	1	2	3	4	
20. Negative attitudes of administrators and instructors which inhibit participation of handicapped students in college programs (29)(30)(4)(43)(44)	1	2	3	4	

Attitudes of non-disabled students

	Very severe			Not severe	Recommendation for Removal
21. Lack of acceptance and negative attitudes of peers (16)(30)(53)(51)(39)	1	2	3	4	
22. Lack of acceptance of handicapping conditions by the public which results in lack of participation by the handicapped in social and recreational aspects of college life (40)	1	2	3	4	
23. Inadequate orientation of non-handicapped students as to how they may better understand and assist handicapped students (45)	1	2	3	4	

Preservice and Inservice Education

	Very severe			Not severe	Recommendation for Removal
24. Lack of general knowledge of the handicapped and handicapping conditions (1)(10)(41)	1	2	3	4	
25. Lack of knowledge that manifestation of handicapping condition is often periodic and unpredictable in timing (23)	1	2	3	4	
26. Assumption on the part of the non-disabled instructor, counselor, or administrator that just because the disabled student has not indicated there are problems, that "everything is fine--we have no problems" (18)	1	2	3	4	
27. Inadequate staff preparation and orientation toward working with handicapped students in the area of various learning modalities (6)(40)	1	2	3	4	
28. Inadequate training and information is provided to teachers regarding psychological aspects, and learning difficulties of specific handicapping conditions (27)	1	2	3	4	

	Very severe			Not severe	Recommendation for Removal
29. Lack of orientation to receptive - expressive language deficiencies and the need for specialized language instruction (9)	1	2	3	4	
30. Lack of programs to prepare post-secondary instructors to teach the handicapped (41)(13)(19)	1	2	3	4	
31. Instructors inadequately trained in techniques to assist the handicapped student to adapt standard procedures to meet his requirements	1	2	3	4	
32. Lack of knowledge of and sensitivity to handicapping conditions in planning, implementing, and evaluating instruction and vocational learner outcomes (38)	1	2	3	4	
33. Lack of knowledge and training by staff and administration to be informed about needs of hearing impaired (58)	1	2	3	4	
34. Lack of counseling and teaching skills needed to accommodate the handicapped student's uniqueness (46)(45)	1	2	3	4	
35. Inadequate training programs for physicians, physical therapists, occupational therapists, and social workers to develop techniques to encourage handicapped individuals to compensate for their disabilities by entering training programs (36)	1	2	3	4	
36. Lack of exposure to the world of work by instructors themselves who often set a poor example (model) (59)	1	2	3	4	
37. Lack of ability on the part of the instructor to adapt curriculum to the needs of handicapped students (17)(12)	1	2	3	4	

	Very severe			Not severe	Recommendation for Removal
Prevocational Training					
38. Lack of appropriate basic and remedial programs in language and math (9)(10)	1	2	3	4	
39. Inadequate pre-vocational skill training (50)(39)	1	2	3	4	
Vocational Instructional Programs and Services					
40. Lack of funds to establish training programs for hearing impaired students (2)	1	2	3	4	
41. Lack of short-term specialized courses to teach limited skills in a specified area (55)	1	2	3	4	
42. Inadequate existing programs for deaf and hearing impaired students (2)	1	2	3	4	
43. Communication problems in all instructional situations with handicapped students (1)	1	2	3	4	
44. Communication problems in groups where disabled students are working with the non-disabled, such as group lab practicals (26)	1	2	3	4	
45. Lack of flexibility in the curriculum to allow the student increased instruction in areas of his expertise (11)	1	2	3	4	
46. Lack of modification of program standards for different handicaps (29)	1	2	3	4	
47. Lack of behavior modification programs coordinated with both credit and non-credit courses (25)	1	2	3	4	

		Very severe			Not severe	Recommendation for Removal
48.	Lack of ongoing contact with the handicapped student to monitor progress and problems and to offer encouragement and support throughout his educational program (35)	1	2	3	4	
49.	Vocational/technical class entrance exams that do not consider handicapping conditions such as learning disabilities in establishing norms (30)	1	2	3	4	
50.	Unwillingness of instructors to give oral examinations when appropriate (9)	1	2	3	4	
51.	Examinations which are sensorily oriented (54)(52)	1	2	3	4	
52.	Training areas within programs tend to delimit the occupational choices available to students by offering such a narrow range of skill training (59)(36)	1	2	3	4	
53.	Lack of special adapted vocabulary lists to help students in various occupational technical programs (37)	1	2	3	4	
54.	Lack of modified textbooks to meet language level of students (37)	1	2	3	4	
55.	Student/trainer ratio too large to allow sufficient individualized hands-on training (50)	1	2	3	4	
56.	Student/trainer ratio too large to allow appropriate administration of tests (50)	1	2	3	4	
57.	Inadequate task analysis of technical skill areas in relation to training students with handicaps (50)	1	2	3	4	
58.	Lack of training programs for handicapped individuals in the emerging technology areas (59)	1	2	3	4	

	Very severe			Not severe	Recommendation for removal
59. Limited variety of vocational/technical areas which accept handicapped students (9)	1	2	3	4	
60. A lack of specific entry level job criteria that a person with limited abilities could accomplish and achieve in order to be employable (16)	1	2	3	4	
61. Absence of a continuum of training skills for elementary through secondary education through vocational technical programs (9)	1	2	3	4	
62. Lack of exit points in the curriculum which allow the student to leave (with recognition) when the student has achieved to the highest level of his ability, or employability (11)	1	2	3	4	
63. Lack of instructional materials and modifications to meet the needs of handicapped students (14)(7)(45)(37)	1	2	3	4	
64. Lack of knowledge regarding adapting the classroom to the handicapped student, or the handicapped student to the classroom and curriculum (5)	1	2	3	4	
65. Lack of reasonable modification of general community college schedules, requirements and procedures (21)	1	2	3	4	
66. Lack of reasonable modification of classroom and laboratory (21)	1	2	3	4	

Vocational materials and equipment

67. Lack of adaptable equipment that will facilitate teaching the handicapped (24)(1)(52)(54)	1	2	3	4	

	Very severe			Not severe	Recommendation for Removal
68. Lack of electronic communication devices to assist the handicapped in understanding, participating and communicating (24)	1	2	3	4	
69. Lack of modified and adaptive equipment for drafting students (27)(19)	1	2	3	4	
70. Lack of special equipment such as special seating, materials, sound lighting, adaptation for wheelchairs (29)	1	2	3	4	
71. Lack of funds to provide for special expenses such as special equipment (33)(21)(41)	1	2	3	4	
72. Difficulty in using independent learning center where cassette-tapes and slides are used for self-paced learning (26)	1	2	3	4	
73. Problems in working with dangerous power equipment, handling of heavy or difficult objects, and coping with difficult working conditions (i.e., wet floors) in vocational technical laboratories (26)	1	2	3	4	
74. Inappropriate design of classrooms, laboratories and lab equipment (21)	1	2	3	4	
75. Lack of specially designed tools, and equipment for handicapped student (11)(17)(22)(10)	1	2	3	4	
76. Inadequate special lighting or magnifying and mechnical devices (16)	1	2	3	4	
77. Inadequately designed learning and work stations to accommodate the handicapped in vocational training programs (44)	1	2	3	4	
78. Lack of typing facilities available to students (37)	1	2	3	4	

	Very severe			Not severe	Recommendation for Removal
79. Inadequate provision of instructional materials and equipment in appropriate media (i.e., special textbooks, tapes and other materials designed for use by the handicapped) (50)(55)(38)(56)	1	2	3	4	
80. Lack of tactile maps, brailler, optacons, enlargers, and talking books (37)	1	2	3	4	
81. Lack of special lighting for interpreters to use who work with deaf students during films (37)	1	2	3	4	
Research					
82. An unwillingness on the part of the academic community at the Administrative and Board level to aggressively research the needs of the handicapped in their district--low budget priority (25)	1	2	3	4	
83. Lack of research in area of employer needs (59)	1	2	3	4	
84. Inadequate learning technology: lack of learning aides and technology to accommodate specific physical impairments (46)	1	2	3	4	
Counseling, Placement and Followup					
85. Lack of realistic counseling and goal setting (11)(9)(1)(22)(7)(48)	1	2	3	4	
86. Lack of diagnostic, counseling, and health centers on the community college campus (11)	1	2	3	4	
87. Inadequate prevocational exploration, background information, and exposure to the world or work (24)(7)	1	2	3	4	
88. Lack of adequate evaluation and diagnosis before making career decisions (1)(13)(16)(10)	1	2	3	4	

		Very severe			Not severe	Recommendation for Removal
89.	Inadequate counseling and guidance services to help handicapped students cope with the educational environment (29)(30)	1	2	3	4	
90.	Inadequate definition of job entry level skills needed by the client to perform in selected career (35)	1	2	3	4	
91.	Inadequate training in job seeking and interviewing skills (7)	1	2	3	4	
92.	Inappropriate placement of students in vocational areas to provide instructors with required number of students (9)	1	2	3	4	
93.	Lack of trained counselors on campus to work with disabled students (27)(41)	1	2	3	4	
94.	Lack of individual counseling sessions for handicapped students (14)	1	2	3	4	
95.	Lack of adequate career and vocational information and job forecasts with respect to disabilities (10)(36)(57)(42)	1	2	3	4	
96.	Inability of counselor to communicate with deaf students (62)	1	2	3	4	
97.	Inadequate support systems such as therapy groups to encourage attendance in school (52)(54)	1	2	3	4	
98.	Inadequate communication with instructor regarding varying degrees of handicapping conditions and the limitations involved (40)	1	2	3	4	
99.	Inadequate preparation for the psychological and physical demands of being a "worker" (59)(44)	1	2	3	4	
100.	Vocational or occupational objectives are often selected without adequate awareness of the impact of the disability on the job (59)	1	2	3	4	

	Very severe			Not severe	Recommendation for Removal
101. Inadequate diagnostic and individual planning for adults with learning disabilities (36)	1	2	3	4	
102. Inadequate training programs for handicapped persons in developing life long planning skills (36)	1	2	3	4	
103. Lack of contact with the home to keep the family aware of the student's adjustment and progress (37)	1	2	3	4	
104. Lack of support services of counseling, advising and self-help groups to provide coping and adaptive skills for school environment and work environment (38)	1	2	3	4	
105. Lack of recruitment of other handicapped students by successful handicapped students (61)	1	2	3	4	
106. Counseling needed to direct students to appropriate programs, to explore qualifications for programs, to determine costs and scholarships available (8)	1	2	3	4	
Student Accounting System					
107. Lack of an adequate system of reporting students to Coordinating Board and Texas Education Agency; current system does not identify handicapped students and in turn does not provide additional funds for provisions of special services (46)	1	2	3	4	
ack of Financial Resources					
08. Lack of financial resources to pay living expenses, tuition, books, etc., and for expenses relating to the handicap itself (36)(55)	1	2	3	4	

BARRIERS WITHIN THE SOCIETY	Very Severe			Not Severe	Recommendation for Removal
Lack of Knowledge About the Helping System					
109. Lack of coordination and identification of community referral agencies (13)	1	2	3	4	
110. Lack of awareness of improvements available through rehabilitation engineering by handicapped persons, their families, professors and rehabilitation personnel (21)	1	2	3	4	
111. Lack of coordination of services between the institutiton and the providers of social services to focus common resources on needs of the handicapped	1	2	3	4	
112. Lack of information available regarding the resources to assist the handicapped, i.e., transportation, medical, personal care, etc. (57)	1	2	3	4	
Attitudinal Barriers					
113. Attitudinal barriers which would not allow a well trained student to function in industry (11)	1	2	3	4	
114. Patronizing attitude on the part of society (34)	1	2	3	4	
115. Exclusion of handicapped students by non-handicapped individuals (31)	1	2	3	4	
116. Indifference within society (34)					
117. Employers or parents who would not allow handicapped students completing child development or child care courses to be responsible for children (28)	1	2	3	4	

	Very severe			Not severe	Recommendation for Removal
118. Negative attitudes toward the handicapped (includes parents of handicapped, teachers or professors, employers, and fellow workers) (1)	1	2	3	4	
119. Inadequate expectations (dependency rather than independency is reinforced by society) (22)(13)	1	2	3	4	
Inadequate Leadership					
120. Community served by Community College may not realize need to serve adult handicapped, i.e., little or no pressure on the college to provide services (41)	1	2	3	4	
Media Barriers					
121. Lack of public education on handicapping conditions (32)	1	2	3	4	
Transportation					
122. Lack of adequate transportation provisions to and from the community college and within it (14)(25)(1)(21)(46)(36)(17)(30)	1	2	3	4	
123. Transportation to job training facility (8)	1	2	3	4	
124. Transportation to employment (32)	1	2	3	4	
Employment Barriers					
125. Unwillingness of employers in private business to provide personnel assistance (advocates) for the handicapped (8)	1	2	3	4	
126. Unwillingness of employers in private business to provide financial support for the handicapped (8)	1	2	3	4	

	Very severe			Not severe	Recommendation for Removal
127. Inability to earn money in part time employment while attending school (12)(27)	1	2	3	4	
128. Poor prospects of obtaining a job after completion of study (21)	1	2	3	4	
129. Stereotyping by society, i.e., "You have diabetes thus you're probably going to be a poorer worker," "You'll cause us to have to pay higher insurance," "You can't learn like the others," "I'll have to spend additional time with you."	1	2	3	4	
130. Unwillingness of employers to hire the hearing impaired (42)	1	2	3	4	
131. Handicapped are routed into "low salary and low prestige" vocations (63)	1	2	3	4	
132. Employers are unwilling to accept handicapped persons in their employ due to lack of sufficient information regarding handicapping conditions (4)	1	2	3	4	

Architectual Barriers - Off Campus

133. Architectural barriers which would not allow a well trained student to function in industry (11)	1	2	3	4	
134. Buildings are inaccessible because they are not barrier free (29)	1	2	3	4	
135. Housing designed to accommodate handicapped students (8)	1	2	3	4	

Competing Demands

136. Apprehension about competing with non-handicapped students for grades, job placement, etc. especially when performance is measured by subjective means as well as objective means.	1	2	3	4	

BARRIERS WITHIN THE HANDICAPPED PERSON, THEIR FAMILIES AND OTHER ADVOCATES

Handicapped Persons: Physical/Mental/Emotional Problems

	Very severe			Not severe	Recommendation for Removal
137. Physical conditions which require medication for control of pain resulting in poor attendance (3)	1	2	3	4	
138. Lack of physical dexterity to manipulate mechanical devices (34)	1	2	3	4	
139. Inadequate mobility skills to cope successfully with job related travel (50)	1	2	3	4	
140. Inadequate motor skills to perform in vocational technical programs (47)	1	2	3	4	
141. Hearing impairments which make some types of employment dangerous for the handicapped individual (42)	1	2	3	4	
142. Difficulty in communicating by writing due to a disability (16)	1	2	3	4	
143. Diseases requiring periodic hospitalization interfere with attendance (3)	1	2	3	4	
144. Lack of physical strength to teach or work with young children (28)	1	2	3	4	
145. Loss of use of dominant arm requires retraining and causes the person to work slowly (3)	1	2	3	4	
146. Physical conditions which impede vocational technical education (20)	1	2	3	4	
147. Inadequate communication skills (7)(33)	1	2	3	4	
148. Difficulty in listening to verbal presentations and taking notes simultaneously (34)	1	2	3	4	
149. Communications problems concerned with receptive and expressive abilities (24)	1	2	3	4	

		Very severe			Not severe	Recommendation for Removal
150.	Communication difficulties: watching the interpreter, taking notes and observing the blackboard simultaneously (27)	1	2	3	4	
151.	Difficulty in paying attention (15)	1	2	3	4	
152.	Cardiovascular conditions which produce insufficient blood supplies to the brain, causing poor memory, poor concentration and blurred vision (3)	1	2	3	4	
153.	Physical conditions which require medication for control of pain result in dulled mental faculties (3)	1	2	3	4	
154.	Inability to accept the discipline and pressure associated with technical programs (12)	1	2	3	4	
155.	Lack of ability to adhere to stringent time schedules (12)	1	2	3	4	
156.	Inability to concentrate on the lecture when verbal material is being presented (34)	1	2	3	4	
157.	Lack of emotional stability (28)	1	2	3	4	
158.	Inability to adapt to discipline of the classroom due to mental illness (3)	1	2	3	4	
159.	Slowed responses and poor concentration caused by medication taken for mental illness which often results in insulation from reality (3)	1	2	3	4	
Handicapped Persons: Lack of Knowledge						
160.	Inability to handle post-secondary academics (18)	1	2	3	4	
161.	Inadequate development of basic skill level (13)(31)(55)	1	2	3	4	

	Very severe			Not severe	Recommendation for Removal
162. Inability to cope with complex written material, charts and graphs (34)	1	2	3	4	
163. Lack of understanding of technical vocabulary on which concepts are built (27)	1	2	3	4	
164. Failure to realistically assess limitations and potentials (30)	1	2	3	4	
165. A lack of perception and knowledge of everyday surroundings due to living in a sheltered environment (16)(9)(18)(4)(60)	1	2	3	4	
166. Inability to transfer learning to application in order to perform in vocational technical programs (47)	1	2	3	4	
167. Lack of knowledge of slang terms by deaf students (61)	1	2	3	4	
168. Inadequate knowledge of life skills (13)(28)(50)	1	2	3	4	
169. Inability to develop feasible goals (30)	1	2	3	4	

Handicapped Persons: Behavioral Barriers

170. Poor home or institutional training for students in areas of initiative, tact, and sharing of responsibiltiy (18)	1	2	3	4	
171. Inadequate knowledge of social behavior, and appropriate (behavorial) skills to perform on a job (8)(39)	1	2	3	4	
172. Inability to adjust towards the life style in a college setting (24)	1	2	3	4	
173. Behavior problems due to mental or emotional impairment which disrupt classes and keep the student from learning (35)	1	2	3	4	

		Very severe			Not severe	Recommendation for Removal
174.	Inability to manage personal affairs in order to concentrate on learning experience (48)	1	2	3	4	
175.	Lack of internal orientation (54)					

Negative Attitudes and Feelings

		Very severe			Not severe	Recommendation for Removal
176.	Poor self concept, low frustration level, making the academic environment more difficult than it actually is (31)(30)(21)	1	2	3	4	
177.	Poor self image leading to the belief that with a disability the client/student cannot compete with others or get a job even if he finishes training (35)(17)(23)(55)	1	2	3	4	
178.	Poor self concept in the area of interpersonal relations (24)(53)	1	2	3	4	
179.	Overly independent attitude, i.e., the student refuses all help and aids (11)	1	2	3	4	
180.	The use of a disability as an excuse for failure or demand for special treatment--"the world owes me a living" attitude (3)(5)(11)	1	2	3	4	
181.	Personal feelings of inadequacy and lack of self worth (52)(54)	1	2	3	4	
182.	Belief that one is being discriminated against due to the handicap (57)	1	2	3	4	
183.	Lack of aggression in demanding appropriate instruction (41)	1	2	3	4	
184.	Anxiety caused by a limited educational background in persons who have not attended school for many years (3)	1	2	3	4	

		Very severe			Not severe	Recommendation for Removal
185.	Fear that a handicap will be detrimental in employment which requires short term contact with the public (example, sales) versus a long term sustained relationship with fewer people (23)	1	2	3	4	
186.	Lack of self esteem and a positive "can do/will do" attitude (19)(22)(1)(21)	1	2	3	4	
187.	Lack of self assurance and assertiveness (7)(12)(4)(41)	1	2	3	4	
188.	Loss of hearing which is often accompanied by paranoid behavior and/or withdrawal resulting in little or no classroom participation and poor attendance (3)	1	2	3	4	
189.	Inability to compete on all levels without special assistance in order to overcome feelings of inadequacy and the emotional problems and frustrations that their special problems cause (16)	1	2	3	4	

Family Members

190.	Family members who provide more assistance than is needed for self improvement (19)(13)	1	2	3	4
191.	Lack of support and encouragement from family (21)	1	2	3	4
192.	A home environment which discourages or destroys interest or initiative on the part of the student (33)	1	2	3	4
193.	Family members who adhere to myths and misconceptions of handicapping conditions (31)	1	2	3	4
194.	Lack of emotional support from significant "others" in social life of the handicapped, i.e., need for sustained encouragement (41)	1	2	3	4

	Very severe			Not severe	Recommendation for Removal
195. Some disabled people also have disabled spouses which put an additional burden on the person (3)	1	2	3	4	
Barriers within Advocates for Handicapped Persons					
196. Lack of public, administrative and parental support to encourage handicapped persons to attend technical programs (36)	1	2	3	4	
197. Inadequate assistance and support which results in fear of entering the world of training and the world or work (36)	1	2	3	4	
198. Goals which are established by peers and society rather than the individual (49)	1	2	3	4	

Name ______________________________________

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APPENDIX G: ROUND THREE DELPHI STUDY

For discussion of the information in Appendix G see page 72.

A STUDY OF BARRIERS ENCOUNTERED BY HANDICAPPED STUDENTS WHICH IMPEDE SUCCESSFUL COMPLETION OF VOCATIONAL TECHNICAL PROGRAMS IN COMMUNITY COLLEGES

Round III Delphi

Thank you for your participation in the first and second rounds of this research. The third round consists of the report of the relative frequency (percent) of the ratings of the severity of the barriers by all respondents and the mean (average) score of all of the respondents.

Please examine each barrier again. Then mark any mean score which you feel is too high or too low, and explain your reason for disagreeing with the score. See the example below:

Barrier	Relative Frequency of Ratings * (Percent) of the Severity of the Barrier					Mean	Comments
	Very Severe 1	2	Not Severe 3	4	Missing (not circled)		
Lack of equipment to provide adaptations to learning, i.e., tools designed or adapted for a cerebral palsy student	18.2	41.8	27.9	9.9	3.6	2.28	This should be given top priority or many students will not be able to complete school

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BARRIERS WITHIN THE HELPING SYSTEM

Legislation	Relative Frequency of Ratings * (Percent) of the Severity of the Barrier					Mean	Comments
	Very Severe 1	2	Not Severe 3	4	Missing (not circled)		
1. A general lack of knowledge in the academic community of Section 504 of the Rehabilitation Act of 1973	12.7	38.2	41.8	7.3	0	2.44	
2. Social Security Disability Insurance legislation which inhibits initiative to prepare for employment	12.7	27.3	45.5	5.5	9.1	2.48	

* Ratings by percentages of individuals responding on Round II (N=55)

Planning and Preparation	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
3. Inadequate planning on the part of the administrative staff for individual student needs of the handicapped such as students with language barriers	21.8	45.5	25.5	7.3	0	2.18	
4. General lack of communication between helping agencies and the training institution	21.8	38.2	38.2	1.8	0	2.20	
5. Too few certified rehabilitation counselors on campuses of the training institution	21.8	38.2	25.5	14.5	0	2.33	
6. Lack of organizational structures which insure meaningful interaction between handicapped and nondisabled students	10.9	25.5	43.5	20.0	0	2.72	
7. Poor planning and organization which results in social barriers, i.e., inability to participate in concerts, hear speakers, or attend films	10.9	32.7	38.2	16.4	1.8	2.61	
8. Lack of planning for required activities which are difficult for handicapped students such as registration	10.9	34.5	40.0	14.5	0	2.58	

Personnel: Support Services	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
9. Inadequate availability of readers, interpreters, tutors and counselors for handicapped students	18.2	43.5	21.8	14.5	1.8	2.33	
10. Lack of funds for support services and staff (i.e., wheelchairs, pushers, attendants, note-takers, interpreters, tutors, etc.)	18.2	41.8	27.3	9.1	3.6	2.28	
11. Lack of initial and ongoing mobility orientation	5.5	23.6	50.9	18.2	1.8	2.83	
12. Lack of skilled interpreters for the deaf in all classes including vocational technical classes	18.2	41.8	25.5	9.1	5.5	2.27	
13. Lack of available qualified tutorial and remedial assistance for people who cannot cope with regular group and classroom procedures	18.2	30.9	36.4	10.9	3.6	2.42	
14. Lack of persons to work with the handicapped to give additional training when needed by private business as it relates to specific job needs	12.7	34.5	38.2	7.3	7.3	2.43	
Attitudes of Community College Personnel							
15. Lack of knowledge of what students can do resulting in negative attitudes toward the limitations of the handicapped students	32.7	38.2	25.5	1.8	1.8	1.96	

	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
6. Lack of knowledge and experience on the part of educators that would make them unwilling to hold students to the same standards of performance of non-handicapped students (example: deaf students)	27.3	29.1	34.5	5.5	3.6	2.19	
7. Inability on the part of the instructor to empathize instead of sympathize	14.5	29.1	43.5	10.9	1.8	2.52	
8. Lack of self-confidence on the part of teachers to teach handicapped students	14.5	32.7	40.0	10.9	1.9	2.48	
9. Lack of understanding and acceptance, and/or indifference toward the special needs of the handicapped on the part of administrators, faculty and staff	29.1	32.7	29.1	7.3	1.8	2.15	
0. Negative attitudes of administrators and instructors which inhibit participation of handicapped students in college programs	20.0	29.1	32.7	16.4	1.8	2.46	
ttitudes of non-disabled students							
. Lack of acceptance and negative attitudes of peers	10.9	23.6	40.0	25.5	0	2.8	

	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
22. Lack of acceptance of handicapping conditions by the public which results in lack of participation by the handicapped in social and recreational aspects of college life	12.7	27.3	56.4	3.6	0	2.5	
23. Inadequate orientation of non-handicapped students as to how they may better understand and assist handicapped students	18.2	45.5	29.1	5.5	1.8	2.22	
Preservice and Inservice Education							
24. Lack of general knowledge of the handicapped and handicapping conditions	21.8	49.1	27.3	0	1.8	2.05	
25. Lack of knowledge that manifestation of handicapping condition is often periodic and unpredictable in timing	5.5	38.2	43.6	10.9	1.8	2.61	
26. Assumption on the part of the non-disabled instructor, counselor, or administrator that just because the disabled student has not indicated there are problems, that "everything is fine--we have no problems"	9.1	38.2	47.3	3.6	1.8	2.46	
27. Inadequate staff preparation and orientation toward working with handicapped students in the area of various learning modalities	16.4	52.7	27.3	3.6	0	2.18	

		Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
28.	Inadequate training and information is provided to teachers regarding psychological aspects, and learning difficulties of specific handicapping conditions	49.1	43.6	25.5	1.8	0	2.00	
29.	Lack of orientation to receptive/expressive language deficiencies and the need for specialized language instruction	9.1	34.5	34.5	14.7	7.3	2.59	
30.	Lack of programs to prepare post-secondary instructors to teach the handicapped	20.9	45.5	18.2	5.5	0	1.98	
31.	Instructors inadequately trained in techniques to assist the handicapped student to adapt standard procedures to meet his requirements	27.3	41.8	27.3	3.6	0	2.07	
32.	Lack of knowledge of and sensitivity to handicapping conditions in planning, implementing, and evaluating instruction and vocational learner outcomes	21.8	41.8	27.3	9.1	0	2.24	
33.	Lack of knowledge and training by staff and administration to be informed about needs of hearing impaired	16.4	34.5	43.5	5.5	0	2.38	

	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
34. Lack of counseling and teaching skills needed to accommodate the handicapped student's uniqueness	10.9	60.0	21.8	7.3	0	2.26	
35. Inadequate training programs for physicians, physical therapists, occupational therapists and social workers to develop techniques to encourage handicapped individuals to compensate for their disabilities by entering training programs	10.9	23.6	43.6	14.5	7.3	2.67	
36. Lack of exposure to the world of work by instructors themselves who often set a poor example (model)	12.7	25.5	34.5	27.3	0	2.76	
37. Lack of ability on the part of the instructor to adapt curriculum to the needs of handicapped students	14.5	29.1	43.5	10.9	1.8	2.52	
Prevocational Training							
38. Lack of appropriate basic and remedial programs in language and math	10.9	27.3	32.7	29.1	0	2.80	
39. Inadequate pre-vocational skill training	18.2	38.2	23.5	15.4	3.6	2.40	
Vocational Instructional Programs and Services							
40. Lack of funds to establish training programs for hearing impaired students	10.9	34.5	30.9	18.2	5.5	2.60	

	Very Severe		Not Severe		Missing		
	1	2	3	4	(not circled)	Mean	Comments
41. Lack of short-term specialized cuurses to teach limited skills in a specified area	14.5	43.5	25.5	14.5	1.8	2.41	
42. Inadequate existing programs for deaf and hearing impaired students	5.5	34.5	38.2	16.4	5.5	2.69	
43. Communication problems in all instructional situations with handicapped students	12.7	30.9	38.2	12.7	5.5	2.54	
44. Communication problems in groups where disabled students are working with the non-disabled, such as group lab practicals	5.5	36.4	38.2	18.2	1.8	2.70	
45. Lack of flexibility in the curriculum to allow the student increased instruction in areas of his expertise	14.5	29.1	36.4	18.2	1.8	2.59	
46. Lack of modification of program standards for different handicaps	14.5	29.1	40.0	16.4	0	2.58	
47. Lack of behavior modification programs coordinated with both credit and non-credit courses	10.9	20.0	34.5	29.1	5.5	2.87	
48. Lack of ongoing contact with the handicapped student to monitor progress and problems and to offer encouragement and support throughout his educational program	10.9	30.9	40.0	16.4	1.8	2.63	

	Very Severe		Not Severe		Missing		
	1	2	3	4	(not circled)	Mean	Comments
49. Vocational/technical class entrance exams that do not consider handicapping conditions such as learning disabilities in establishing norms	10.9	32.7	36.4	18.2	1.8	2.63	
50. Unwillingness of instructors to give oral examinations when appropriate	12.7	9.1	45.5	30.9	1.8	2.96	
51. Examinations which are sensorily oriented	10.9	21.8	41.8	21.8	3.5	2.77	
52. Training areas within programs tend to delimit the occupational choices available to students by offering such a narrow range of skill training	9.1	25.5	41.8	21.8	1.8	2.78	
53. Lack of special adapted vocabulary lists to help students in various occupational technical programs	10.9	12.7	43.5	30.9	1.8	2.96	
54. Lack of modified textbooks to meet language level of students	14.5	20.0	50.9	14.5	0	2.65	
55. Student/trainer ratio too large to allow sufficient individualized hans-on training	23.6	29.1	32.7	14.5	0	2.38	
56. Student/trainer ratio too large to allow appropriate administration of tests	20.0	21.8	36.4	20.0	1.8	2.57	

	Very Severe		Not Severe		Missing		
	1	2	3	4	(not circled)	Mean	Comments
57. Inadequate task analysis of technical skill areas in relation to training students with handicaps	23.6	21.8	41.8	9.1	3.6	2.38	
58. Lack of training programs for handicapped individuals in the emerging technology areas	20.0	27.3	38.2	14.5	0	2.47	
59. Limited variety of vocational/technical areas which accept handicapped students	14.5	29.1	40.0	14.5	1.8	2.56	
60. A lack of specific entry level job criteria that a person with limited abilities could accomplish and achieve in order to be employable	20.0	29.1	34.5	10.9	5.5	2.39	
61. Absence of a continuum of training skills for elementary through secondary education through vocational technical programs	20.0	32.7	32.7	10.9	3.6	2.36	
62. Lack of exit points in the curriculum which allow the student to leave (with recognition) when the student has achieved to the highest level of his ability, or employability	9.1	27.3	41.8	20.0	1.8	2.74	
63. Lack of instructional materials and modifications to meet the needs of handicapped students	23.6	38.2	27.3	9.1	1.8	2.22	

	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
64. Lack of knowledge regarding adapting the classroom to the handicapped student, or the handicapped student to the classroom and curriculum	10.9	43.5	36.4	9.1	0	2.43	
65. Lack of reasonable modification of general community college schedules, requirements and procedures	3.6	18.2	67.3	9.1	1.8	2.83	
66. Lack of reasonable modification of classroom and laboratory	9.1	25.5	50.9	14.5	0	2.71	
Vocational materials and equipment							
67. Lack of adaptable equipment that will facilitate teaching the handicapped	25.5	40.0	23.5	7.3	3.6	2.13	
68. Lack of electronic communication devices to assist the handicapped in understanding, participating and communicating	14.5	18.2	52.7	9.1	5.5	2.60	
69. Lack of modified and adaptive equipment for drafting students	10.9	25.5	45.5	12.7	5.5	2.63	
70. Lack of special equipment such as special seating, materials, sound lighting, adaptation for wheelchairs	16.4	36.4	34.5	10.9	1.8	2.41	

	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Means	Comments
71. Lack of funds to provide for special expenses such as special equipment	30.9	40.0	20.0	5.5	3.6	2.00	
72. Difficulty in using independent learning center where cassette-tapes and slides are used for self-paced learning	9.1	30.9	49.1	9.1	1.8	2.59	
73. Problems in working with dangerous power equipment, handling of heavy or difficult objects, and coping with difficult working conditions (i.e., wet floors) in vocational technical laboratories	20.0	16.4	40.0	18.2	5.5	2.60	
74. Inappropriate design of classrooms, laboratories and lab equipment	14.5	23.6	43.6	14.5	3.6	2.60	
75. Lack of specially designed tools, and equipment for handicapped student	18.2	36.4	30.9	9.1	5.5	2.33	
76. Inadequate special lighting or magnifying and mechanical devices	7.3	30.9	43.6	10.9	7.3	2.63	
77. Inadequately designed learning and work stations to accommodate the handicapped in vocational training programs	10.9	32.7	36.4	12.7	7.3	2.55	

	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
78. Lack of typing facilities available to students	12.7	12.7	47.3	23.6	3.6	2.85	
79. Inadequate provision of instructional materials and equipment in appropriate media (i.e., special textbooks, tapes and other materials designed for use by the handicapped)	12.7	47.3	29.1	5.5	5.5	2.29	
80. Lack of tactile maps, brailler, optacons, enlargers, and talking books	16.4	34.5	27.3	12.7	9.1	2.40	
81. Lack of special lighting for interpreters to use who work with deaf students during films	7.3	21.8	41.8	18.2	10.9	2.80	
Research							
82. An unwillingness on the part of the academic community at the Administrative and Board level to aggressively research the needs of the handicapped in their district--low budget priority	32.7	29.1	27.3	5.5	5.5	2.06	
83. Lack of research in area of employer need	18.2	45.5	21.8	10.9	3.6	2.26	
84. Inadequate learning technology: lack of learning aides and technology to accommodate specific physical impairments	14.5	32.7	36.4	9.1	7.3	2.43	

	Very Severe		Not Severe		Missing		
Counseling, Placement and Followup	1	2	3	4	(not circled)	Mean	Comments
85. Lack of realistic counseling and goal setting	20.0	45.5	27.3	3.6	3.6	2.15	
86. Lack of diagnostic, counseling, and health centers on the community college campus	10.9	38.2	36.4	10.9	3.6	2.49	
87. Inadequate prevocational exploration, background information, and exposure to the world of work	27.3	40.0	25.5	3.6	3.5	2.06	
88. Lack of adequate evaluation and diagnosis before making career decisions	21.8	41.8	29.1	3.6	3.6	2.15	
89. Inadequate counseling and guidance services to help handicapped students cope with the educational environment	9.1	41.8	36.4	9.1	3.5	2.47	
90. Inadequate definition of job entry level skills needed by the client to perform in selected career	16.4	23.6	49.1	9.1	1.8	2.52	
91. Inadequate training in job seeking and interviewing skills	14.5	41.8	38.2	3.6	1.8	2.32	
92. Inappropriate placement of students in vocational areas to provide instructors with required number of students	7.3	16.4	40.0	32.7	3.6	3.02	

		Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
93.	Lack of trained counselors on campus to work with disabled students	14.5	43.5	30.9	9.1	1.8	2.35	
94.	Lack of individual counseling sessions for handicapped students	10.9	29.1	40.0	16.4	3.6	2.64	
95.	Lack of adequate ca. nd vocational information and job forecasts with respect to disabilities	20.0	34.5	32.7	9.1	3.6	2.32	
96.	Inability of counselor to communicate with deaf students	21.8	27.3	30.9	16.4	3.6	2.43	
97.	Inadequate support systems such as therapy groups to encourage attendance in school	12.7	29.1	40.0	16.4	1.8	2.61	
98.	Inadequate communication with instructor regarding varying degrees of handicapping conditions and the limitations involved	12.7	36.4	43.6	5.5	1.3	2.43	
99.	Inadequate preparation for the psychological and physical demands of being a "worker"	20.0	34.5	30.9	12.7	1.8	2.37	
100.	Vocational or occupational objectives are often selected without adequate awareness of the impact of the disability on the job	20.0	36.4	32.7	9.1	.8	2.32	

		Very Severe		Not Severe		Missing		
		1	2	3	4	(not circled)	Mean	Comments
101.	Inadequate diagnostic and individual planning for adults with learning disabilities	18.2	32.7	36.4	9.1	3.6	2.38	
102.	Inadequate training programs for handicapped persons in developing life long planning skills	16.4	29.1	49.1	3.6	1.8	2.41	
103.	Lack of contact with the home to keep the family aware of the student's adjustment and progress	7.3	18.2	54.5	16.4	3.6	2.83	
104.	Lack of support services of counseling, advising and self-help groups to provide coping and adaptive skills for school environment and work environment	10.9	30.9	47.3	9.1	1.8	2.56	
105.	Lack of recruitment of other handicapped students by successful handicapped students	9.1	20.0	45.5	23.6	1.8	2.85	
106.	Counseling needed to direct students to appropriate programs, to explore qualifications for programs, to determine costs and scholarships available	9.1	30.9	43.6	10.9	5.5	2.60	

Student Accounting System	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
107. Lack of an adequate system of reporting students to Coordinating Board and Texas Education Agency; current system does not identify handicapped students and in turn does not provide additional funds for provisions of special services	23.6	23.6	32.7	14.5	5.5	2.40	
Lack of Financial Resources							
108. Lack of financial resources to pay living expenses, tuition, books, etc., and for expenses relating to the handicap itself	25.5	27.3	30.9	7.3	9.1	2.22	
BARRIERS WITHIN THE SOCIETY							
Lack of Knowledge About the Helping System							
109. Lack of coordination and identification of community referral agencies	18.2	34.5	38.2	3.6	5.5	2.29	
110. Lack of awareness of improvements available through rehabilitation engineering by handicapped persons, their families, professors and rehabilitation personnel	9.1	29.1	50.9	7.3	3.6	2.59	
111. Lack of coordination of services between the institution and the providers of social services to focus common resources on needs of the handicapped	20.0	27.3	38.2	9.1	5.5	2.38	

	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
2. Lack of information available regarding the resources to assist the handicapped, i.e., transportation, medical, personal care, etc.	14.5	36.4	36.4	3.6	9.1	2.32	
ttitudinal Barriers							
3. Attitudinal barriers which would not allow a well trained student to function in industry	14.5	29.1	38.2	9.1	9.1	2.46	
4. Patronizing attitude on the part of society	14.5	32.7	34.5	12.7	5.5	2.48	
5. Exclusion of handicapped students by non-handicapped individuals	7.3	21.8	49.1	18.2	3.6	2.81	
6. Indifference within society	10.9	29.1	47.3	7.3	5.5	2.54	
7. Employers or parents who would not allow handicapped students completing child development or child care courses to be responsible for children	14.5	23.6	40.0	12.7	9.1	2.56	
8 Negative attitudes toward the handicapped (includes parents of handicapped, teachers or professors, employers, and fellow workers)	9.1	41.8	38.2	9.1	1.8	2.48	
9. Inadequate expectations (dependency rather than independency is reinforced by society)	10.9	38.2	38.2	9.1	3.6	2.47	

	Very Severe		Not Severe		Missing		
Inadequate Leadership	1	2	3	4	(not circled)	Mean	Comments
120. Community served by Community College may not realize need to serve adult handicapped, i.e., little or no pressure on the college to provide services	18.2	30.9	41.8	7.4	1.8	2.39	
Media Barriers							
121. Lack of public education on handicapping conditions	32.7	29.1	25.5	9.1	3.6	2.11	
Transportation							
122. Lack of adequate transportation provisions to and from the community college and within it	32.7	27.3	29.1	9.1	1.8	2.15	
123. Transportation to job training facility	23.6	27.3	34.5	10.9	3.6	2.34	
124. Transportation to employment	23.5	29.1	30.9	10.9	5.5	2.31	
Employment Barriers							
125. Unwillingness of employers in private business to provide personnel assistance (advocates) for the handicapped	12.7	29.1	38.2	12.7	7.3	2.54	
126. Unwillingness of employers in private business to provide financial support for the handicapped	12.7	23.6	34.5	18.2	10.9	2.66	

	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
27. Inability to earn money in part time employment while attending school	9.1	23.5	49.1	12.7	5.5	2.69	
28. Poor prospects of obtaining a job after completion of study	10.9	36.4	36.4	9.1	7.3	2.47	
29. Stereotyping by society, i.e., "You have diabetes thus you're probably going to be a poorer worker," "You'll cause us to have to pay higher insurance," "You can't learn like the others," "I'll have to spend additional time with you."	29.1	30.1	29.1	5.5	5.5	2.12	
30. Unwillingness of employers to hire the hearing impaired	14.5	32.7	41.8	7.3	3.5	2.43	
31. Handicapped are routed into "low salary and low prestige" vocations	18.2	25.5	43.5	9.1	3.6	2.45	
32. Employers are unwilling to accept handicapped persons into their employ due to lack of sufficient information regarding handicapping conditions	27.3	34.5	29.1	3.6	5.5	2.10	
rchitectural Barriers - Off Campus							
33. Architectural barriers which would not allow a well trained student to function in industry	27.3	36.4	27.3	5.5	3.5	2.11	

	Very Severe		Not Severe		Missing		
	1	2	3	4	(not circled)	Mean	Comments
4. Buildings are inaccessible because they are not barrier free	25.5	38.2	29.1	3.6	3.6	2.11	
5. Housing designed to accommodate handicapped students	21.8	40.0	23.5	10.9	3.5	2.25	
mpeting Demands							
6. Apprehension about competing with non-handicapped students for grades, job placement, etc. especially when performance is measured by subjective means as well as objective means.	12.7	30.9	40.0	9.1	7.3	2.49	
RRIERS WITHIN THE HANDICAPPED PERSON, EIR FAMILIES AND OTHER ADVOCATES							
ndicapped Persons: Physical/Mental/ otional Problems							
7. Physical conditions which require medication for control of pain resulting in poor attendance	3.6	30.9	45.5	14.5	5.5	2.75	
8. Lack of physical dexterity to manipulate mechanical devices	9.1	34.5	43.5	12.7	3.6	2.66	
9. Inadequate mobility skills to cope successfully with job related travel	9.1	34.5	43.5	9.1	3.6	2.55	

	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
140. Inadequate motor skills to perform in vocational technical programs	14.5	29.1	36.4	16.4	3.6	2.57	
141. Hearing impairments which make some types of employment dangerous for the handicapped individual	9.1	27.3	40.0	16.4	7.3	2.69	
142. Difficulty in communicating by writing due to a disability	9.1	34.5	43.6	9.1	3.6	2.55	
143. Diseases requiring periodic hospitalization interfere with attendance	9.1	32.7	45.5	9.1	3.5	2.57	
144. Lack of physical strength to teach or work with young children	5.5	12.7	47.3	29.1	5.5	3.06	
145. Loss of use of dominant arm requires retraining and causes the person to work slowly	3.6	25.5	49.1	16.4	5.5	2.83	
146. Physical conditions which impede vocational technical education	9.1	29.1	43.6	10.9	7.3	2.61	
147. Inadequate communication skills	7.3	25.5	45.5	12.7	9.1	2.70	
148. Difficulty in listening to verbal presentations and taking notes simultaneously	7.3	34.5	45.5	7.3	5.5	2.56	

	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
49. Communications problems concerned with receptive and expressive abilities	10.9	27.3	43.5	12.7	5.5	2.62	
50. Communication difficulties: watching the interpreter, taking notes and observing the blackboard simultaneously	14.5	32.7	36.4	10.9	5.5	2.46	
51. Difficulty in paying attention	9.1	12.7	52.7	20.0	5.5	2.89	
52. Cardiovascular conditions which produce insufficient blood supplies to the brain, causing poor memory, poor concentration and blurred vision	10.9	25.5	34.5	21.8	7.3	2.73	
53. Physical conditions which require medication for control of pain result in dulled mental faculties	14.5	20.0	41.8	18.2	5.5	2.67	
54. Inability to accept the discipline and pressure associated with technical programs	9.1	23.6	45.5	14.5	7.3	2.71	
55. Lack of ability to adhere to stringent time schedules	10.9	18.2	50.9	14.5	5.5	2.73	
56. Inability to concentrate on the lecture when verbal material is being presented	9.1	20.0	47.3	16.4	7.3	2.77	

		Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
157.	Lack of emotional stability	9.1	27.3	43.5	14.5	5.5	2.67	
158.	Inability to adapt to discipline of the classroom due to mental illness	10.9	32.7	29.1	20.0	7.3	2.63	
159.	Slowed responses and poor concentration caused by medication taken for mental illness which often results in insulation from reality	12.7	30.9	30.9	18.2	7.3	2.59	
Handicapped Persons: Lack of Knowledge								
160.	Inability to handle post-secondary academics	12.7	27.3	36.4	16.4	7.3	2.61	
161.	Inadequate development of basic skill level	15.4	36.4	29.1	10.9	7.3	2.37	
162.	Inability to cope with complex written material, charts and graphs	9.1	27.3	41.8	12.7	9.1	2.64	
163.	Lack of understanding of technical vocabulary on which concepts are built	7.3	21.8	47.3	14.5	9.1	2.76	
164.	Failure to realistically assess limitations and potentials	14.5	32.7	38.2	3.6	10.9	2.35	
165.	A lack of perception and knowledge of everyday surroundings due to living in a sheltered environment	12.7	41.8	34.5	3.6	7.3	2.31	

	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
166. Inability to transfer learning to application in order to perform in vocational technical programs	5.5	14.5	52.7	18.2	9.1	2.92	
167. Lack of knowledge of slang terms by deaf students	9.1	7.3	49.1	20.0	14.5	2.94	
168. Inadequate knowledge of life skills	9.1	29.1	45.5	9.1	7.3	2.59	
169. Inability to develop feasible goals	10.9	23.6	52.7	5.5	7.3	2.57	
Handicapped Persons: Behavioral Barriers							
170. Poor home or institutional training for students in areas of initiative, tact, and sharing of responsibility	10.9	38.2	36.4	5.5	9.1	2.40	
171. Inadequate knowledge of social behavior, and appropriate (behavioral) skills to perform on a job	9.1	36.4	38.2	9.1	7.3	2.51	
172. Inability to adjust towards the life style in a college setting	5.5	21.8	52.7	12.7	7.3	2.78	
173. Behavior problems due to mental or emotional impairment which disrupt classes and keep the student from learning	10.9	27.3	36.4	18.2	7.3	2.67	

	Very Severe		Not Severe		Missing		
	1	2	3	4	(not circled)	Mean	Comments
174. Inability to manage personal affairs in order to concentrate on learning experience	9.1	25.5	43.5	12.7	9.1	2.66	
175. Lack of internal orientation	9.1	10.9	25.5	3.6	50.9	2.48	
Negative Attitudes and Feelings							
176. Poor self concept, low frustration level, making the academic environment more difficult than it actually is	14.5	34.5	38.2	1.8	10.9	2.16	
177. Poor self image leading to the belief that with a disability the client/student cannot compete with others or get a job even if he finishes training	20.0	38.2	30.9	1.8	9.1	2.16	
178. Poor self concept in the area of interpersonal relations	10.9	38.2	40.0	1.8	9.1	2.36	
179. Overly independent attitude, i.e., the student refuses all help and aids	7.3	9.1	52.7	21.8	9.1	2.98	
180. The use of a disability as an excuse for failure or demand for special treatment--"the world owes me a living" attitude	12.7	23.6	40.0	14.5	9.1	2.62	

		Very Severe		Not Severe		Missing		
		1	2	3	4	(not circled)	Mean	Comments
181.	Personal feelings of inadequacy and lack of self worth	12.7	32.7	38.2	5.5	10.9	2.41	
182.	Belief that one is being discriminated against due to the handicap	5.5	25.5	50.9	9.1	9.1	2.70	
183.	Lack of aggression in demanding appropriate instruction	10.9	25.5	36.4	18.2	9.1	2.68	
184.	Anxiety caused by a limited educational background in persons who have not attended school for many years	14.5	21.8	45.5	7.3	10.9	2.51	
185.	Fear that a handicap will be detrimental in employment which requires short term contact with the public (example, sales) versus a long term sustained relationship with fewer people	9.1	14.5	49.1	18.2	9.1	2.84	
186.	Lack of self esteem and a positive "can do/will do" attitude	18.2	30.9	36.4	7.3	7.3	2.35	
187.	Lack of self assurance and assartiveness	23.5	23.5	41.8	3.6	7.3	2.28	
188.	Loss of hearing which if often accompanied by paranoid behavior and/or withdrawal resulting in little or no classroom participation and poor attendance	12.7	20.0	40.0	16.4	10.9	2.67	

	Very Severe 1	2	3	Not Severe 4	Missing (not circled)	Mean	Comments
189. Inability to compete in all levels without special assistance in order to overcome feelings of inadequacy and the emotional problems and frustrations that their special problems cause	9.1	23.5	45.5	10.9	10.9	2.65	
Family Members							
190. Family members who provide more assistance than is needed for self improvement	14.5	30.9	32.7	12.7	9.1	2.48	
191. Lack of support and encouragement from family	14.5	21.8	41.8	12.7	9.1	2.58	
192. A home environment which discourages or destroys interest or initiative on the part of the student	20.0	25.5	36.4	7.3	10.9	2.35	
193. Family members who adhere to myths and misconceptions of handicapping conditions	18.2	25.5	36.4	10.9	9.1	2.44	
194. Lack of emotional support from significant "others" in social life of the handicapped, i.e., need for sustained encouragement	14.5	36.4	30.9	7.3	10.9	2.35	
195. Some disabled people also have disabled spouses which put an additional burden on the person	3.6	18.2	43.5	27.3	7.3	3.02	

	Very Severe 1	2	Not Severe 3	4	Missing (not circled)	Mean	Comments
Barriers within Advocates for Handicapped Persons							
196. Lack of public, administrative and parental support to encourage handicapped persons to attend technical programs	14.5	29.1	45.5	7.3	3.5	2.47	
197. Inadequate assistance and support which results in fear of entering the world of training and the world of work	10.9	47.3	34.5	3.5	3.6	2.32	
198. Goals which are established by peers and society rather than the individual	27.3	29.1	34.5	7.3	1.8	2.22	

Name ______________________________

APPENDIX H: FEASIBILITY RATINGS OF REMOVAL OF BARRIERS

Memo to Rehabilitation Counselors

Memo from John A. Fenoglio, TRC

Letter to Student

Information Form

Objectives of the Study

Questionnaire: Feasibility Ratings for Removal of Barriers

For discussion of the information in Appendix H see pages 73 and 74.

TEXAS A&M UNIVERSITY
COLLEGE OF EDUCATION
COLLEGE STATION, TEXAS 77843

CENTER FOR CAREER
DEVELOPMENT AND
OCCUPATIONAL PREPARATION

MEMORANDUM

TO: Texas Rehabilitation Counselors
FROM: Joan Jernigan
Principal Investigator
DATE: May 22, 1978

As discussed by telephone, the enclosed questionnaire is to be completed by two handicapped students in vocational programs in the community college program. The memo from John Fenoglio further explains the purpose of the questionnaire.

If you have any questions, please call me at (713) 845-6818.

Thank you for your assistance with this study.

TEXAS REHABILITATION COMMISSION
OFFICE MEMORANDUM

TO: Regional Directors

FROM: John A. Fenoglio

SUBJECT: REMOVING BARRIERS TO HANDICAPPED STUDENTS ON COMMUNITY COLLEGE CAMPUSES

DATE: May 15, 1978 RE:

The attached information identifies the objectives of a current research study being conducted by Ms. Joann Jernigan, Principal Investigator, and Dr. Donald L. Clark, Project Director at Texas A & M University. To include student input for the identification of barriers on Community College Campuses, the following field assistance is requested:

1. TRC counselors serving all 53 Community Colleges will be contacted within the next 10-15 days by Joann Jernigan.
2. Ms. Jernigan will mail to each counselor two 60 question survey forms to be filled out by two TRC clients attending the community college.
3. The TRC counselor is asked to (a) select the two clients, (b) administer the questionnaire, and (c) return the questionnaire to Ms. Jernigan by June 9th.

Approximate one hour of counselor/client time will be expended.

A significant purpose of the study is to initiate action to better educate and sensitize college personnel to the needs of handicapped students. It is felt that this study can only help the overall program efforts of the Commission in developing services and programs for Commission clients attending Community Colleges across the state. Client input is vital to the meaningfulness of this study.

Ms. Jernigan will include a copy of this memorandum in her written correspondence to the Community College Counselors. Thank you and your staff for your assistance in helping to complete this study.

cc: Joann Jernigan
Ralph White
Ron Trull

TRC-703

TEXAS A&M UNIVERSITY
COLLEGE OF EDUCATION
COLLEGE STATION, TEXAS 77843

May 22, 1978

CENTER FOR CAREER
DEVELOPMENT AND
OCCUPATIONAL PREPARATION

Dear Student,

A Research Team across the State of Texas has been studying barriers which handicapped students encounter in trying to enter or complete vocational technical programs in Community Colleges in Texas. Hundreds of barriers have been identified which are grouped under three areas: 1) barriers within the helping system (including the community college), 2) barriers within society, and 3) barriers within the handicapped person, their families and other advocates. The study did not include architectural barriers on the community college campus, only the barriers other than the architectural ones. In addition the seventy-three persons comprising the research team have made thousands of recommendations for the removal of the barriers. Some of these are given in the questionnaire which is being sent to you with this letter.

We would like to ask that you assist the Research Team by indicating if, in your opinion, the recommendations can be carried out; that is, are they "feasible". Read the barrier, then read the recommendations for removing the barrier, and rate each recommendation by circling the appropriate number. For instance, if you feel that it is definitely not feasible, circle the "5". If you are really not sure, or do not feel either way, circle the "3". Please try to circle a number by each recommendation.

We are sending these questionnaires to community college students in vocational technical education programs all over Texas. Your assistance with this information may help other handicapped students to be able to enter and complete vocational technical programs in community colleges in Texas. We do not need your name, and no attempt will be made to correspond your name with the data provided. Please return the questionnaire and information about yourself in the envelope enclosed. We would like to have the information by June 6 so that we can put all of the data in a final report. Thank you very much for your help with this study.

Donald L. Clark
Project Director

Joan Jernigan
Joan Jernigan
Principal Investigator

PLEASE COMPLETE THE FOLLOWING INFORMATION

1. What is your handicapping condition?

____

____

2. What vocational program are you in?

____

____

3. Age____________Sex (circle one) Male Female

4. What kind of job do you expect to get when you finish?

____

____

5. Name of college you are attending:

____

WE DO NOT NEED YOUR NAME

OBJECTIVES OF THE STUDY

Objective 1: Identify criteria for successful completion of vocational technical programs by handicapped students at community colleges in Texas, and, as a result, identify services or programs to remove barriers for vocational students with handicapping conditions.

Objective 2: Identify specific barriers (other than architectural within the school setting) which exist in community colleges in Texas in vocational technical programs which would inhibit enrollment or completion of the vocational technical program by the handicapped student.

Objective 3: Identify strategies for implementing findings of the Delphic study in community colleges in vocational technical programs.

Objective 4: Develop a report for state agencies summarizing criteria for successful completion of vocational technical programs at the community colleges in Texas, and recommend services or programs which would remove barriers for vocational students at the community college level.

Objective 5: Develop a guide which can be utilized by administrators, counselors and teachers.

A STUDY OF BARRIERS ENCOUNTERED BY HANDICAPPED STUDENTS WHICH IMPEDE SUCCESSFUL COMPLETION OF VOCATIONAL TECHNICAL PROGRAMS IN COMMUNITY COLLEGES

Thank you for your participation in this research. This part consists of the barriers that you and other experts have rated as being extremely severe, and the recommendations for the removal of these barriers.

Please read each barrier carefully again, read the recommendations for the removal of the barrier, and rate the recommendation according to the feasibility for removing the barrier.

The scale to use for criteria is as follows: Feasibility

1 -- Definitely Feasible

2 -- Feasible

3 -- Possibly feasible

4 -- Possibly unfeasible

5 -- Definitely unfeasible

Example:

Barrier	Recommendation for Removal	Feasibility				
Lack of equipment to provide adaptations to learning, i.e., tools designed or adapted for a cerebral palsy student	Obtain legislative support to increase funding to purchase any equipment necessary, regardless of cost.	1	2	3	4	5

BARRIERS WITHIN THE HELPING SYSTEM

Legislation	Recommendation for Removal	Definitely feasible				Definitely unfeasible
1. A general lack of knowledge in the academic community of Section 504 of the Rehabilitation Act of 1973	Inform via workshops, printed material, administrative policy.	1	2	3	4	5
	Each organization should adopt policies to implement locally.	1	2	3	4	5
	Legislators should be requested to make wording less difficult.	1	2	3	4	5

	Recommendation for Removal	Definitely feasible				Definitely unfeasible
1. (con't.)	Communicate and disseminate through news media.	1	2	3	4	5
	Provide orientation seminars on the nature and effect of Section 504 for key administrative personnel.	1	2	3	4	5
2. Social Security Disability Insurance legislation which inhibits initiative to prepare for employment	Make these funds available for vocational education.	1	2	3	4	5
	Remove earnings limitations.	1	2	3	4	5
	Provide yearly interviews by rehabilitation counselors.	1	2	3	4	5
Planning and Preparation						
3. Inadequate planning on the part of the administrative staff for individual student needs of the handicapped such as language barriers.	Establish inservice training for community college administrators.	1	2	3	4	5
	Establish an affirmative action program to include handicapped students.	1	2	3	4	5
	Include this type of assistance in curriculum.	1	2	3	4	5
4. General lack of communication between helping agencies and the training institution.	Assign a liaison person to each community college.	1	2	3	4	5
	Establish interagency committees to provide for more exchange of information.	1	2	3	4	5
	Provide information in preservice training at colleges and universities.	1	2	3	4	5
5. Too few certified rehabilitation counselors on campuses of the training institution.	Establish some type of funding formula to assure an adequate ratio of rehabilitation counselors to students.	1	2	3	4	5
	Make the job of counselor more attractive to new or prospective counselors.	1	2	3	4	5

	Recommendation for Removal	Definitely feasible				Definitely unfeasible
5. (con't.)	Provide the "common client" concept where various institutions pool resources and focus on a common client.	1	2	3	4	5
6. Lack of organizational structures which insure meaningful interaction between handicapped and nondisabled students	All programs should be designed to avoid lack of integrated activities.	1	2	3	4	5
	Seek specific kinds of commitments and actions from top administrative staff.	1	2	3	4	5
7. Poor planning and organization which results in social barriers, i. e., inability to participate in concerts, hear speakers or attend films	Lack of planning is not usually intentional, therefore, policy statements and written reminders should be implemented.	1	2	3	4	5
	Conduct workshops and inservice training to plan and organize to assist the handicapped in participating in social events.	1	2	3	4	5
8. Lack of planning for required activities which are difficult for handicapped students such as registration	All agencies should cooperate in making recommendations to school officials	1	2	3	4	5
	Plan a different procedure for disabled students.	1	2	3	4	5
9. Inadequate availability of readers, interpreters, tutors and counselors for handicapped students	Develop a system for vocational resources similar to the Texas Learning Resource Center network, to locate all available resources.	1	2	3	4	5
	Secure funding for such positions on community college campuses.	1	2	3	4	5
	Establish training programs for these helpers.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible			Definitely unfeasible	
10.	Lack of funds for support services and staff (i. e., wheelchairs, pushers, attendants, note-takers, interpreters, tutors, etc.)	Obtain legislative support (funding).	1	2	3	4	5
		Establish priorities for current funding which would designate "facilitators" for vocational training (human or material) as a top priority.	1	2	3	4	5
		Establish training programs for these helpers.	1	2	3	4	5
11.	Lack of initial and ongoing mobility orientation	Should be stressed by the agency involved and put in budget by the community college administration.	1	2	3	4	5
12.	Lack of skilled interpreters for the deaf in all classes including vocational technical classes	Training of student service personnel and funds must be made more available.	1	2	3	4	5
13.	Lack of available qualified tutorial and remedial assistance for people who cannot cope with regular group and classroom procedures	Change attitudes of personnel who fail to realize the need for this assistance.	1	2	3	4	5
		Provide appropriate training programs for personnel to develop tutorial and remedial assistance.	1	2	3	4	5
		Secure funding for such positions on community college campuses.	1	2	3	4	5
14.	Lack of persons to work with the handicapped to give additional training when needed by private business as it relates to specific job needs	Business might provide personnel to work with handicapped persons.	1	2	3	4	5
		Provide training and funds for job placement personnel.	1	2	3	4	5
15.	Lack of knowledge of what students can do resulting in negative attitudes toward the limitations of the handicapped students	Provide inservice programs to educate teachers and administrators and bring about attitudinal changes (especially in the case of mental handicaps).	1	2	3	4	5
		Establish more preservice training in universities concerning resources which are available to handicapped, how to access resources, and how to use these resources.	1	2	3	4	5

	Recommendation for Removal	Definitely feasible			Definitely unfeasible	
16. Lack of knowledge and experience on the part of educators that would make them unwilling to hold students to the same standards of performance of non-handicapped students (example: deaf students)	Provide inservice sensitivity and awareness to educate persons responsible for the education of the handicapped.	1	2	3	4	5
	Establish definitive behavioral objectives and minimum skill levels needed for job entry that must be met in order to complete course.	1	2	3	4	5
17. Inability on the part of the instructor to empathize instead of sympathize	Provide inservice training for personnel working with the handicapped which include practical applications and activities.	1	2	3	4	5
	Make information about various handicaps available to instructors.	1	2	3	4	5
18. Lack of self-confidence on the part of teachers to teach handicapped students	Provide both pre and in-service training for community college faculty	1	2	3	4	5
19. Lack of understanding and acceptance and/or indifference toward the special needs of the handicapped on the part of administrators, faculty and staff	Provide better and more inservices for community college personnel including knowledge and training on techniques of working with the handicapped student.	1	2	3	4	5
20. Negative attitudes of administrators and instructors which inhibit participation of handicapped students in college programs	Design formal courses of study, workshops and inservice training to bring about attitudinal changes (including removal of "fear")	1	2	3	4	5
Attitudes of Non-disabled Students						
21. Lack of acceptance and negative attitudes of peers	Provide awareness training activities on community college campuses for the student body	1	2	3	4	5
	Develop and conduct inservice training for educators to bring about acceptance of the handicapped which will lead to peer acceptance.	1	2	3	4	5

	Recommendation for Removal	Definitely feasible				Definitely unfeasible
22. Lack of acceptance of handicapping conditions by the public which results in lack of participation by the handicapped in social and recreational aspects of college life	Generally people fear what they don't understand; more information should be provided to the public regarding handicapping conditions.	1	2	3	4	5
	Develop and conduct inservice training for teachers and non-handicapped students.	1	2	3	4	5
23. Inadequate orientation of non-handicapped students as to how they may better understand and assist handicapped students	Provide awareness training activities on community college campuses for the student body.	1	2	3	4	5

Preservice and Inservice Education

24. Lack of general knowledge of the handicapped and handicapping conditions	Most instructors who are asked to work with handicapped students must learn the hard way - trial and error. Teacher training sessions must include working with handicapped in their own particular discipline.	1	2	3	4	5
25. Lack of knowledge that manifestation of handicapping condition is often periodic and unpredictable in timing	Information regarding the handicapping condition should be provided to the educator at the time the student registers.	1	2	3	4	5
	Instructors should schedule counseling sessions with all students.	1	2	3	4	5
	Public relations efforts should be conducted.	1	2	3	4	5
26. Assumption on the part of the non disabled instructor, counselor, or administrator that just because the disabled student has not indicated there are problems, that "everything is fine--we have no problems"	Provide basic knowledge about handicapping conditions through inservice programs	1	2	3	4	5
	Replace the traditional lecture and norm-referenced evaluation with individualized instruction.	1	2	3	4	5
	Teach the student to communicate their problems.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible				Definitely unfeasible
27.	Inadequate staff preparation and orientation toward working with handicapped students in the area of various learning modalities	Provide staff with useful skills which can be applied in teaching the handicapped through inservice and preservice training.	1	2	3	4	5
		Train the faculty and staff to screen and refer students to specialists.	1	2	3	4	5
28.	Inadequate training and information is provided to teachers regarding psychological aspects, and learning difficulties of specific handicapping conditions	Preservice and inservice training should include basic knowledges about handicapping conditions and stress that wide variances between and among people with the same handicap exists.	1	2	3	4	5
29.	Lack of orientation to receptive expressive language deficiencies and the need for specialized language instruction.	Develop classes for the learning disabled and deaf.	1	2	3	4	5
		Pay instructors to attend special inservice.	1	2	3	4	5
30.	Lack of programs to prepare post-secondary instructors to teach the handicapped	Inservice, or one or two classes in instructor training programs should be provided	1	2	3	4	5
		Secure state mandate for such training	1	2	3	4	5
		Develop an educational program for vocational teacher trainers and Texas Education Agency post-secondary staff.	1	2	3	4	5
31.	Instructors inadequately trained in techniques to assist the handicapped student to adapt standard procedures to meet his requirements	Instructors should be assisted by a resource person (advisor or counselor)	1	2	3	4	5
		Provide graduate level seminars and workshops as a part of employment.	1	2	3	4	5
32.	Lack of knowledge of and sensitivity to handicapping conditions in planning, implementing, and evaluating instruction and vocational learner outcomes	Provide inservice training of faculty	1	2	3	4	5
		Provide more research in this area	1	2	3	4	5

	Recommendation for Removal	Definitely feasible				Definitely unfeasible
33. Lack of knowledge and training by staff and administration to be informed about the needs of the hearing impaired	The needs of the student are generally known; the staff and administration must learn how to meet these needs.	1	2	3	4	5
	A resource person should be provided.	1	2	3	4	5
34. Lack of counseling and teaching skills needed to accommodate the handicapped student's uniqueness	Provide inservice training	1	2	3	4	5
	Obtain legislative support to add counselors and staff.	1	2	3	4	5
35. Inadequate training programs for physicians, physical therapists, occupational therapists, and social workers to develop techniques to encourage handicapped individuals to compensate for their disabilities by entering training programs	Research need for training.	1	2	3	4	5
	Provide more training with emphasis on helping the disabled attain the highest level of skill possible	1	2	3	4	5
36. Lack of exposure to the world of work by instructors themselves who often set a poor example (model)	Obtain assistance from a consultant	1	2	3	4	5
	Upgrade local hiring practices.	1	2	3	4	5
37. Lack of ability on the part of the instructor to adapt curriculum to the needs of handicapped students	Provide an assistant to help the instructor	1	2	3	4	5
	Provide pre-developed material and instructions for modification of curriculum	1	2	3	4	5
	Incorporate and integrate training in curriculum adaptation into teacher preparation programs.	1	2	3	4	5

Prevocational training

38. Lack of appropriate basic and remedial programs in language and math	Develop departmental programs.	1	2	3	4	5
	Make tutorial support available	1	2	3	4	5

	Recommendation for Removal	Definitely feasible				Definitely unfeasible
. (con't.)	Stress the importance of placing emphasis on these subjects to the high schools	1	2	3	4	5
. Inadequate prevocational skill training	Provide more funds for prevocational skill training	1	2	3	4	5
	Increase emphasis on public school career education, vocational program development and opportunities for participation by handicapped students.	1	2	3	4	5

ocational Instructional Programs and Services

). Lack of funds to establish training programs for hearing impaired students	Obtain more funds for training (federal agencies and non-profit organizations)	1	2	3	4	5
1. Lack of short-term specialized courses to teach limited skills in a specified area	Could be handled through continuing education program.	1	2	3	4	5
	Per student cost makes funding difficult; pooling of resources may be the answer.	1	2	3	4	5
	Determine the needed areas and request appropriation of funds.	1	2	3	4	5
2. Inadequate existing programs for deaf and hearing impaired students	Request additional funding to implement necessary programs	1	2	3	4	5
	Individualized contracted instruction can be provided for this student body.	1	2	3	4	5
3. Communication problems in all instructional situations with handicapped students.	Establish an interdisciplinary team to conduct a program review and make recommendations	1	2	3	4	5
. Communication problems in groups where disabled students are working with the non-disabled, such as group lab practicals.	Provide for orientation programs for non-handicapped to acquaint them with problems handicaps have.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible				Definitely unfeasible
45.	Lack of flexibility in the curriculum to allow the student increased instruction in areas of his expertise.	A resource person and the department responsible need to develop individualized programs for the handicapped.	1	2	3	4	5
		On-the-job training might be more practical.	1	2	3	4	5
		Establish more flexible entry-exit points of skill development.	1	2	3	4	5
46.	Lack of modification of program standards for different handicaps	A resource person and the department responsible need to develop individualized programs for the handicapped.	1	2	3	4	5
47.	Lack of behavior modification programs coordinated with both credit and non-credit courses	Establish an interdisciplinary team to conduct a program review and make recommendations.	1	2	3	4	5
48.	Lack of ongoing contact with the handicapped student to monitor progress and problems and to offer encouragement and support throughout his educational program.	Provide more counselors	1	2	3	4	5
		Establish better coordination between agencies and the staff at the community college	1	2	3	4	5
		Establish top priorities for rehabilitation services to provide ongoing support for handicapped students in the early years of training and job experience.	1	2	3	4	5
		Provide individualized educational planning.	1	2	3	4	5
49.	Vocational/technical class entrance exams that do not consider handicapping conditions such as learning disabilities in establishing norms.	Remove or modify norms to accommodate the handicapped.	1	2	3	4	5
50.	Unwillingness of instructors to give oral examinations when appropriate.	Pay instructors for the service.	1	2	3	4	5
		Enlist help from student assistance.	1	2	3	4	5

	Recommendation for Removal	Definitely feasible			Definitely unfeasible	
1. Examinations which are sensorily oriented.	Provide alternate methods of testing.	1	2	3	4	5
2. Training areas within programs tend to delimit the occupational choices available to students by offering such a narrow range of skill training.	Broaden the range of skill training	1	2	3	4	5
	Awareness of alternatives related to the field should be incorporated in career workshops.	1	2	3	4	5
3. Lack of special adapted vocabulary lists to help students in various occupational technical programs.	Provide reading programs for specific technical majors	1	2	3	4	5
	Necessary materials should be prepared by the faculty/staff concerned.	1	2	3	4	5
4. Lack of modified textbooks to meet langauge level of students	Provide modified texts (tape, rewrite) or teach with teacher made materials	1	2	3	4	5
	Consult with the book company	1	2	3	4	5
5. Student/trainer ratio too large to allow sufficient individualized hands-on training	Provide special assistants, aides and/or volunteers.	1	2	3	4	5
	Obtain legislative support to increase funding for more personnel.	1	2	3	4	5
6. Student/trainer ratio too large to allow appropriate administration of tests.	Provide a specialized testing program.	1	2	3	4	5
	Provide funds for better student/trainer ratio or special assistants.	1	2	3	4	5
	Individualize testing procedures.	1	2	3	4	5
	Hire a paraprofessional	1	2	3	4	5
7. Inadequate task analysis of technical skill areas in relation to training students with handicaps	Fund exemplary programs in area of task analysis.	1	2	3	4	5
	Train staff in methods of scientific job/task analysis in curriculum development.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible				Definitely unfeasible
58.	Lack of training programs for handicapped individuals in the emerging technology areas	Obtain funding to permit organization and implementation of such programs.	1	2	3	4	5
		Form a liason with business.	1	2	3	4	5
59.	Limited variety of vocational/technical areas which accept handicapped students	Provide pre and inservice education for faculty and administration to bring about attitudinal changes.	1	2	3	4	5
		Expand electives and subject areas.	1	2	3	4	5
		Identify "model" programs which community college administration and faculty can visit as an example.	1	2	3	4	5
60.	A lack of specific entry level job criteria that a person with limited ability could accomplish and achieve in order to be employable.	Work closely with business to establish jobs that handicapped persons may do.	1	2	3	4	5
		Bring in consultants for technical assistance.	1	2	3	4	5
		Develop a career ladder self-paced program.	1	2	3	4	5
61.	Absence of a continuum of training skills for elementary through secondary education through vocational technical programs	Establish a sequential curriculum.	1	2	3	4	5
		Obtain legislative support to increase funding for more personnel and broader range of training opportunities at all levels.	1	2	3	4	5
62.	Lack of exit points in the curriculum which allow the student to leave (with recognition) when the student has achieved to the highest level of his ability or employability	Establish new policies at the Texas Education Agency level.	1	2	3	4	5
		Establish such point for all students and stop counting "completers" on reporting as seven year certificate or two year degree.	1	2	3	4	5
63.	Lack of instructional materials and modifications to meet the needs of handicapped students.	Provide training for faculty to make necessary modifications in materials.	1	2	3	4	5

	Recommendation for Removal	Definitely feasible			Definitely unfeasible	
(con't.)	Prepare and make available materials which will enable a student to learn *either* by seeing or hearing.	1	2	3	4	5
Lack of knowledge regarding adapting the classroom to the handicapped student, or the handicapped student to the classroom.	Obtain a consultant to assist with adaptation.	1	2	3	[illegible]	5
	Teach handicapped students to communicate their needs.	1	2	3	4	5
	Provide inservice training.	1	2	3	4	5
	Purchase limited adaptable equipment with financial aid available.	1	2	3	4	5
Lack of reasonable modification of general community college schedules, requirements and procedures.	Place a person in each community college who will promote more and better adapted programs for the disabled.	1	2	3	4	5
	Establish an open entry/open exit program.	1	2	3	4	5
Lack of adaptable equipment that will facilitate teaching the handicapped.	Place a person in each community college who will promote more and better adapted programs for the disabled.	1	2	3	4	5
	Involve vocational classes in construction of specialized equipment.	1	2	3	4	5

A STUDY OF BARRIERS ENCOUNTERED BY HANDICAPPED STUDENTS WHICH IMPEDE SUCCESSFUL COMPLETION OF VOCATIONAL TECHNICAL PROGRAMS IN COMMUNITY COLLEGES

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1 -- Definitely feasible

2 -- Feasible

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4 -- Possibly unfeasible

5 -- Definitely unfeasible

Example:

Barrier	Recommendation for Removal	Feasibility				
Lack of equipment to provide adaptations to learning, i. e., tools designed or adapted for a cerebral palsy student	Obtain legislative support to increase funding to purchase any equipment necessary, regardless of cost.	1	2	3	4	5

BARRIERS WITHIN THE HELPING SYSTEM

Vocational Materials and Equipment	Recommendation for Removal	Definitely feasible				Definitely unfeasible
67. Lack of adaptable equipment that will facilitate teaching the handicapped.	Establish a pool of adaptable equipment available to various teachers on request.	1	2	3	4	5
	Secure funding for necessary additional equipment.	1	2	3	4	5
68. Lack of electronic communication devices to assist the handicapped in understanding, participating and communicating.	Obtain funds, and promote research and development	1	2	3	4	5

	Problem	Recommendation for Removal	Definitely feasible				Definitely unfeasible
69.	Lack of modified and adaptive equipment for drafting students	Obtain funds (excess cost funding), promote research and development.	1	2	3	4	5
70.	Lack of special equipment such as special seating, materials, sound lighting, adaptation for wheelchairs	Obtain funds (excess cost funding), promote research and development.	1	2	3	4	5
		Involve the community and vocational classes in constuction or acquisition of equipment.	1	2	3	4	5
71.	Lack of funds to provide for special expenses such as special equipment	Obtain funds (excess cost funding), promote research and development.	1	2	3	4	5
		Initiate special adaptive devices with the individual rather than the institution.	1	2	3	4	5
		Obtain more legislative support.	1	2	3	4	5
72.	Difficulty in using independent learning center where cassette-tapes and slides are used for self-paced learning	Hire work-study students to assist.	1	2	3	4	5
		Provide alternate learning activities	1	2	3	4	5
73.	Problems in working with dangerous power equipment, handling of heavy or difficult objects, and coping with difficult working conditions (i. e., wet floors) in vocational technical laboratories	Provide orientation for instructors	1	2	3	4	5
		Change the program of the handicapped student who is obviously unsuited for the course.	1	2	3	4	5
74.	Inappropriate design of classrooms, laboratories and equipment.	Secure funding for necessary additional equipment.	1	2	3	4	5
		Make necessary adaptations.	1	2	3	4	5
75.	Lack of specially designed tools, and equipment for handicapped students.	Research should be promoted in the area of specially designed tools and equipment.	1	2	3	4	5
		Develop a system for vocational resources similar to the Texas Learning Resource Center (TEA) network to locate resources.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible			Definitely unfeasible	
76.	Inadequate special lighting or magnifying and mechanical devices	Obtain funds (excess cost funding), promote research and development.	1	2	3	4	5
77.	Inadequately designed learning and work stations to accommodate the handicapped in vocational training courses.	Obtain funding; promote research and development.	1	2	3	4	5
78.	Lack of typing facilities available to students.	Provide a learning center.	1	2	3	4	5
		Obtain funding	1	2	3	4	5
79.	Inadequate provision of instructional materials and equipment in appropriate media (i.e., special textbooks, tapes and other materials designed for use by the handicapped.	Obtain funding, promote research and development.	1	2	3	4	5
		Develop a system for vocational resources similar to the Texas Learning Resource Center (TEA) network to locate resources.	1	2	3	4	5
80.	Lack of tactile maps, brailler, optacons, enlargers, and talking books.	Obtain these through resources which make them available.	1	2	3	4	5
81.	Lack of special lighting for interpreters to use who work with deaf students during films.	Obtain funding (excess cost funding).	1	2	3	4	5
Research							
82.	An unwillingness on the part of the academic community at the Administrative and Board level to aggressivley research the needs of the handicapped in their district - low budget priority.	Apply for grants to colleges to fund research and need identification of disabled students.	1	2	3	4	5
		Provide funded graduate level seminars and workshops with graduate credit to be conducted during working hours.	1	2	3	4	5
		Conduct a needs assessment and present to the governing board.	1	2	3	4	5
83.	Lack of research in area of employer needs	Apply to local civic groups for funding	1	2	3	4	5
		Determine employment needs so training can be directed towards these areas.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible				Definitely unfeasible
83.	(con't.)	Assign this responsibility to the Texas Rehabilitation Commission.	1	2	3	4	5
84.	Inadequate learning technology: lack of learning aides and technology to accommodate specific impairments.	Provide funds for adequate research	1	2	3	4	5
		Apply current research and technology (technology not lacking)	1	2	3	4	5
Counseling, placement and followup							
85.	Lack of realistic counseling and goal setting	Provide training for counselors	1	2	3	4	5
		Secure specially trained counselors	1	2	3	4	5
86.	Lack of diagnostic, counseling, and health centers on the community college campus.	Employ and/or train appropriate personnel and monitor to see that services are provided.	1	2	3	4	5
		Make administration aware of the laws.	1	2	3	4	5
87.	Inadequate prevocational exploration background information, and exposure to the world of work.	Provide adequate prevocational exploration, background information and exposure to the world of work at the high school level.	1	2	3	4	5
		Provide for student vocational evaluation and counseling.	1	2	3	4	5
		Provide more preservice training in universities regarding resources available to the handicapped.	1	2	3	4	5
88.	Lack of adequate evaluation and diagnosis before making career decisions.	Facilitate exchange of information among agencies and community colleges.	1	2	3	4	5
		Provide counseling.	1	2	3	4	5
89.	Inadequate counseling and guidance services to help handicapped students cope with the educational environment.	Provide training for counselors and secure specially trained counselors.	1	2	3	4	5
		Increase number of counselors.	1	2	3	4	5

	Recommendation for Removal	Definitely feasible			Definitely unfeasible	
90. Inadequate definition of job entry level skills needed by the client to perform in selected careers						
91. Inadequate training in job seeking and interviewing skills	Establish top priorities for rehabilitation services to provide ongoing support for handicapped students in early years of training and job experience.	1	2	3	4	5
92. Inappropriate placement of students in vocational areas to provide instructors with required number of students.	Be more concerned about quality of training rather than numbers.	1	2	3	4	5
93. Lack of trained counselors on campus to work with disabled students.	Provide training for counselors and secure specially trained counselors	1	2	3	4	5
	Encourage handicapped students to use counseling services.	1	2	3	4	5
94. Lack of individual counseling sessions for handicapped students	Provide regularly scheduled counseling sessions for handicapped students.	1	2	3	4	5
	Provide workshops to assist counselors.	1	2	3	4	5
95. Lack of adequate career and vocational information and job forecasts with respect to disabilities.	Develop a better system of dissemination of vocational and career information with job forecasts.	1	2	3	4	5
	Develop a direction system for vocational resources similar to the Texas Learning Resource Center (TEA) network to locate all available resources.	1	2	3	4	5
	Develop research in this area.	1	2	3	4	5
96. Inability of the counselor to communicate with deaf students.	Employ or train counselors who can communicate with deaf students.	1	2	3	4	5
97. Inadequate support systems such as therapy groups to encourage attendance in school	Train counselors to provide these services.	1	2	3	4	5
	Provide a larger counseling staff.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible				Definitely unfeasible
98.	Inadequate communication with instructor regarding varying degrees of handicapping conditions and the limitations involved.	Train counselors to communicate with instructors regarding handicapping conditions.	1	2	3	4	5
		Make a resource person, or consultant responsible.	1	2	3	4	5
99.	Inadequate preparation for the psychological and physical demands of being a "worker"	Provide inservice training for counselors to prepare student to meet demands of being a "worker".	1	2	3	4	5
		Provide regularly scheduled counseling sessions during the vocational training.	1	2	3	4	5
		Increase emphasis on public school career education and vocational program development and opportunities for participation by handicapped students.	1	2	3	4	5
100.	Vocational or occupational objectives are often selected without adequate awareness of the impact of the disability on the job.	Experienced counselors with a realistic approach should assist students in selecting vocational objectives.	1	2	3	4	5
101.	Inadequate disagnostic and individual planning for adults with learning disabilities.	Research and development of diagnostics for adults with learning disabilities should be conducted.	1	2	3	4	5
		Assist in skill development techniques.	1	2	3	4	5
102.	Inadequate training for handicapped persons in developing life long planning skills						
103.	Lack of contact with the home to keep the family aware of the student's adjustment and progress.	Place renewed emphasis on this barrier.	1	2	3	4	5
104.	Lack of support services of counseling, advising and self-help groups to provide coping and adaptive skills for school environment and work environments.	Create handicapped "clubs" for students where they can exchange ideas about coping.	1	2	3	4	5
		Provide workshops to help counselors with this.	1	2	3	4	5

	Recommendation for Removal	Definitely feasible				Definitely unfeasible
105. Lack of recruitment of other handicapped students by successful handicapped students.	Provide funds to develop such counseling services.	1	2	3	4	5
106. Counseling needed to direct students to appropriate programs, to explore qualifications for programs, to determine costs and scholarships available	Provide funds to develop counseling services in these areas.	1	2	3	4	5
	Develop a system for vocational resources similar to the Texas Learning Resource Center (TEA) to locate all available resources.	1	2	3	4	5

Student Accounting System

107. Lack of an adequate system of reporting students to Coordinating Board and TEA; current system does not identify handicapped students and in turn does not provide additional funds for provisions of special services.	Develop a method of accounting for students.	1	2	3	4	5

Lack of Financial Resources

108. Lack of financial resources to pay living expenses, tuition, books, etc., and for expenses relating to the handicap itself.	The Texas Rehabilitation Agency, Commission for the Blind and other state agencies need to be more liberal of acceptance of clients.	1	2	3	4	5
	More legislative support is needed.	1	2	3	4	5
	Make the need known to various organizations who might provide scholarships or needed grants.	1	2	3	4	5

BARRIERS WITHIN SOCIETY

Lack of knowledge About the Helping System

109. Lack of coordination and identification of community referral agencies.	Publish a directory for the area served by each community college.	1	2	3	4	5
	Designate a particular on-campus counselor to have information available.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible				Definitely unfeasible
110.	Lack of awareness of improvements available through rehabilitation engineering by handicapped persons, their families, professors and rehabilitation personnel.	Distribution of publications by research and development agencies to consumers and consumer agencies.	1	2	3	4	5
111.	Lack of coordination of services between the institution and the providers of social services to focus common resources on needs of the handicapped.	Establish interagency committees.	1	2	3	4	5
		Designate a liaison person and complement with community research component.	1	2	3	4	5
112.	Lack of information available regarding the resources to assist the handicapped, i. e., transportation, medical, personal care, etc.	Establish interagency committees.	1	2	3	4	5
		Provide transportation assistance.	1	2	3	4	5

Attitudinal Barriers

113.	Attitudinal barriers which would not allow a well trained student to function in industry	Establish an effective public awareness campaign.	1	2	3	4	5
114.	Patronizing attitude on the part of society.	Provide more public relations information	1	2	3	4	5
		Provide preservice training in universities to change attitudes of educators.	1	2	3	4	5
115.	Exclusion of handicapped students by non-handicapped individuals	Provide more public information	1	2	3	4	5
116.	Indifference within society	Provide more public information	1	2	3	4	5
117.	Employers or parents who would not allow handicapped students completing child development or child care courses to be responsible for children.	Provide a well-timed effective public awareness campaign at federal, state, and local levels.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible			Definitely unfeasible	
118.	**Negative attitudes toward the handicapped (includes parents of handicapped, teachers or professors, employers, and fellow workers)**	Provide systematic education of the public through media	1	2	3	4	5
119.	Inadequate expectations (dependency rather than independency is reinforced by society)	Provide for in preservice education and experience.	1	2	3	4	5
Inadequate Leadership							
120.	Community served by Community College may not realize the need to serve adult handicapped, i. e., little or no pressure on the college to provide services.	Utilize mass media to make community aware of the need for programs, create concern and interest in their well-being (such as Child Find)	1	2	3	4	5
Media Barriers							
121.	Lack of public education on handicapping conditions	Provide public relations programs and information to the public.	1	2	3	4	5
		Use case studies in public advertising to assist the disabled person, i. e., stories about the director of the Veterans Administration.	1	2	3	4	5
Transportation							
122.	Lack of adequate transportation provisions to and from the community college and within it	Secure necessary funds for transportation system.	1	2	3	4	5
		Involve the community	1	2	3	4	5
		Should be addressed by a coordinated public transportation system which is accessible to the full spectrum of students with handicapping conditions. For each of the facilities mentioned to try to initiate its own transportation is very expensive and not usually cost effective. Helping System should be able to purchase transportation services from the accessible transportation.	1	2	3	4	5

	Recommendation for Removal	Definitely feasible			Definitely unfeasible	
123. Transportation to job training facility	Include transportation in excess costs for mainstreaming.	1	2	3	4	5
	Conduct a needs assessment.	1	2	3	4	5
124. Transportation to employment	Include transportation in excess costs for mainstreaming.	1	2	3	4	5
Employment Barriers						
125. Unwillingness of employers in private business to provide personnel assistance (advocates) for the handicapped	Conduct a sustained campaign of education of potential employers.	1	2	3	4	5
	Research should provide statistics to indicate that personnel assistance will help business.	1	2	3	4	5
126. Unwillingness of employers in private business to provide financial support for the handicapped.	Provide tax credits for extra expenses employers encounter in training the handicapped.	1	2	3	4	5
127. Inability to earn money in part time employment while attending school	Plan with work study program and set up a job placement for handicapped.	1	2	3	4	5
	Provide part time employment in the school system.	1	2	3	4	5
128. Poor prospects of obtaining a job after completion of study.	These would be improved by careful selection of training program.	1	2	3	4	5
	Establish top priorities for rehabilitation services to provide on-going support for handicapped students in early years of training and job experience.	1	2	3	4	5
129. Stereotyping by society, i. e., "You have diabetes thus you're probably going to be a poorer worker", "You'll cause us to have to pay higher insurance", "You can't learn like the others", "I'll have to spend additional time with you".	Provide public education regarding the capabilities of the handicapped.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible				Definitely unfeasible
0.	Unwillingness of employers to hire the hearing impaired.	Provide public education regarding the capabilities of the deaf.	1	2	3	4	5
		Change OSHA rules.	1	2	3	4	5
1.	Handicapped are routed into "low salary and low prestige" vocations	Provide career information to counselors and students.	1	2	3	4	5
2.	Employers are unwilling to accept handicapped persons in their employ due to lack of sufficient information regarding handicapping conditions.	Conduct a public campaign regarding the abilities of the handicapped.	1	2	3	4	5
		Provide employers information regarding the handicapping conditions.	1	2	3	4	5
rchitectural Barriers - Off Campus							
3.	Architectural barriers which would not allow a well trained student to function in industry	Work with the City Planning Department as well as individual businesses	1	2	3	4	5
		Enforce current laws.	1	2	3	4	5
		Give tax credits to remove barriers	1	2	3	4	5
4.	Buildings are inaccessible because they are not barrier free	Funding should be obtained to assist with this problem.	1	2	3	4	5
		Enforce current laws.	1	2	3	4	5
5.	Housing designed to accommodate handicapped students.	Funding should be obtained to assist with this problem.	1	2	3	4	5
mpeting Demands							
6.	Apprehension about competing with non-handicapped sutdents for grades, job placement, etc., especially when performance is measured by subjective means as well as objective means.	Teachers could assist by helping the handicapped to understand that they are competing only with themselves.	1	2	3	4	5

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BARRIERS WITHIN THE HANDICAPPED PERSON, THEIR FAMILIES AND OTHER ADVOCATES

Handicapped Persons: Physical/Mental/Emotional Problems	Recommendation for Removal	Definitely feasible				Definitely unfeasible
137. Physical conditions which require medication for control of pain resulting in poor attendance	Careful planning of the class schedule should be done, so that the student can take advantage of the time when they are not sedated.	1	2	3	4	5
	Make instructors aware of this.	1	2	3	4	5
	Develop a home bound program.	1	2	3	4	5
138. Lack of physical dexterity to manipulate mechanical devicies	Develop assist apparatus	1	2	3	4	5
	Place a student in a program where he will not have to cope with the problem	1	2	3	4	5

		Recommendation for Removal	Definitely feasible				Definitely unfeasible
139.	Inadequate mobility skills to cope successfully with job related travel	Develop assist apparatus	1	2	3	4	5
		Provide more and better transit systems	1	2	3	4	5
140.	Inadequate motor skills to perform in vocational technical programs	Develop assist apparatus.	1	2	3	4	5
		Select a program or field where he can perform.	1	2	3	4	5
141.	Hearing impairments which make some types of employment dangerous for the handicapped individual	Do not put a hearing impaired person in such an environment.	1	2	3	4	5
142.	Difficulty in communicating by writing due to a disability	Obtain a support person or a student helper.	1	2	3	4	5
		Develop assist apparatus.	1	2	3	4	5
		Develop other means of communication if another method is acceptable.	1	2	3	4	5
143.	Diseases requiring periodic hospitalization interfere with attendance	Provide programs of independent instruction.	1	2	3	4	5
		Provide good counseling services.	1	2	3	4	5
144.	Lack of physical strength to teach or work with young children						
145.	Loss of use of dominant arm requires retraining and causes the person to work slowly	Schedule training at a slower rate	1	2	3	4	5
146.	Physical conditions which impede vocational technical education	Select a vocation in which the disability has less impact.	1	2	3	4	5
147.	Inadequate communication skills	Provide developmental courses for students.	1	2	3	4	5
148.	Difficulty in listening to verbal presentations and taking notes simulatneously	Provide tape recorders to these students.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible			Definitely unfeasible	
149.	Communications problems concerned with receptive and expressive abilities	Provide special courses for students with these problems.	1	2	3	4	5
150.	Communication difficulties: watching the interpreter, taking notes and observing the blackboard simultaneously	Provide special courses for students with these problems.	1	2	3	4	5
		Educators need to understand that these persons are not in the class for grades, but to learn what they can.	1	2	3	4	5
		Provide special teachers and small classes.	1	2	3	4	5
151.	Difficulty in paying attention.	Instructor should talk slower and to the point.	1	2	3	4	5
152.	Cardiovascular conditions which produce insufficient blood supplies to the brain, causing poor memory, poor concentration and blurred vision.	Try to alleviate these before training begins.	1	2	3	4	5
153.	Physical conditions which require medication for control of pain result in dulled mental faculties	Schedule classes for times of optimum functioning.	1	2	3	4	5
		Provide homebound programs and support personnel	1	2	3	4	5
		Make nurses available on campus.	1	2	3	4	5
154.	Inability to accept the discipline and pressure associated with technical programs	Provide readily available counseling to ease frustration.	1	2	3	4	5
155.	Lack of ability to adhere to stringent time schedules.	Select a type of training which will allow for this	1	2	3	4	5
		Allow for more flexibility in schedules.	1	2	3	4	5

	Recommendation for Removal	Definitely feasible				Definitely unfeasible
156. Inability to concentrate on the lecture when verbal material is being presented.	Provide special coaching on listening techniques.	1	2	3	4	5
	Provide support personnel (note takers) tutors	1	2	3	4	5
157. Lack of emotional stability	Provide regular counseling.	1	2	3	4	5
158. Inability to adapt to the discipline of the classroom due to mental illness	Provide regular counseling.	1	2	3	4	5
159. Slowed responses and poor concentration caused by medication taken for mental illness which often results in insulation from reality	Obtain medical advice	1	2	3	4	5
Handicapped persons: Lack of Knowledge						
160. Inability to handle post-secondary academics	Provide remedial education and/or special tutors.	1	2	3	4	5
	Do not provide for social promotion.	1	2	3	4	5
161. Inadequate development of basic skill level	Provide special tutors and/or remedial education	1	2	3	4	5
	Increase emphasis on public school career education and vocational program development and opportunities for participation by handicapped students.	1	2	3	4	5
162. Inability to cope with complex written material, charts and graphs	Conduct a more careful evaluation before selecting the training program.	1	2	3	4	5
	Individualize instruction	1	2	3	4	5
163. Lack of understanding of technical vocabulary on which concepts are built.	Develop reading (subject oriented) classes.	1	2	3	4	5
	Have faculty/staff prepare necessary materials.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible				Definitely unfeasible
164.	Failure to realistically assess limitations and potentials	Provide more comprehensive counseling	1	2	3	4	5
		Provide reality counseling	1	2	3	4	5
		Students should be encouraged to overcome limitations -- they have potentials they are not aware of.	1	2	3	4	5
165.	A lack of perception and knowledge of everyday surroundings due to living in a sheltered environment	Provide initial orientation sessions prior to community college enrollment	1	2	3	4	5
		Do not give more assistance than is absolutely required. Force handicapped to work to his/her maximum potential.	1	2	3	4	5
166.	Inability to transfer learning to application in order to perform in vocational technical programs	Provide for controlled exposure to the "outside world".	1	2	3	4	5
167.	Lack of knowledge of slang terms by deaf students	Special instruction should be provided that will help student adapt.	1	2	3	4	5
168.	Inadequate knowledge of life skills	Provide counseling services	1	2	3	4	5
		Involve the student's family	1	2	3	4	5
169.	Inability to develop feasible goals	Provide reality counseling	1	2	3	4	5
Handicapped Persons: Behavioral Barriers							
170.	Poor home or institutional training for students in areas of initiative, tact, and sharing of responsibility	Provide adequate counseling	1	2	3	4	5
171.	Inadequate knowledge of social behavior, and appropriate (behavioral) skills to perform on a job	Group counseling and teaching.	1	2	3	4	5
		Establish top priorities for rehabilitation services to provide ongoing support for handicapped students in early years of training and job experience.	1	2	3	4	5
172.	Inability to adjust towards the life style in a college setting.						

	Recommendation for Removal	Definitely feasible				Definitely unfeasible
73. Behavior problems due to mental or emotional impairments which disrupt classes and keep the student from learning	These should be resolved or minimized before training begins.	1	2	3	4	5
	Provide behavioral therapy.	1	2	3	4	5
74. Inability to manage personal affairs in order to concentrate on learning experience	Provide opportunity to develop skills through counseling.	1	2	3	4	5
75. Lack of internal orientation						

egative Attitudes and Feelings

	Recommendation for Removal	Definitely feasible				Definitely unfeasible
76. Poor self concept, low frustration level, making the academic environment more difficult than it actually is.	Develop programmed short term goals and positive feedback.	1	2	3	4	5
	Establish needed support systems for handicapped students in all settings.	1	2	3	4	5
	Provide more one on one counseling and instruction.	1	2	3	4	5
77. Poor self image leading to the belief that with a disability the client/student cannot compete with others or get a job even if he finishes training.	Provide special counseling/assistance	1	2	3	4	5
	Have students come back to school and talk to the disability student, let them tell others what to expect.	1	2	3	4	5
78. Poor self concept in the area of interpersonal relations	Provide group counseling	1	2	3	4	5
	Provide opportunities for social interaction	1	2	3	4	5
	Establish needed support systems for handicapped students in all settings.	1	2	3	4	5
79. Overly independent attitude, i. e., the student refuses all help and aids.	Provide therapy for the student	1	2	3	4	5
80. The use of a disability as an excuse for failure or demand for special treatment "the world owes me a living" attitude	Provide long-term therapy.	1	2	3	4	5
	Do not give more assistance than is required; force the student to work to his/her maximum potential.	1	2	3	4	5

		Recommendation for Removal	Definitely feasible			Definitely unfeasible	
181.	Personal feelings of inadequacy and lack of self worth	Provide counseling in groups.	1	2	3	4	5
		Provide programmed learning experiences	1	2	3	4	5
		Establish needed support systems for handicapped students in all settings.	1	2	3	4	5
182.	Belief that one is being discriminated against due to the handicap	Provide counseling	1	2	3	4	5
183.	Lack of agression in demanding appropriate instruction	Provide group counseling	1	2	3	4	5
184.	Anxiety caused by a limited educational background in persons who have not attended school for many years.	Begin training at a slow rate to insure success and provide psycholotical support.	1	2	3	4	5
185.	Fear that a handicap will be detrimental in employment which requires short term contact with the public (example: sales) versus a long term sustained relationship with fewer people.						
186.	Lack of self esteem and a positive "can do/will do" attitude	Provide special counseling and assistance	1	2	3	4	5
187.	Lack of self assurance and assertiveness	Provide special counseling and assistance	1	2	3	4	5
188.	Loss of hearing which is often accompanied by paranoid behavior and/or withdrawal resulting in little or no classroom participation and poor attendance	Provide special counseling and assistance	1	2	3	4	5
189.	Inability to compete on all levels without special assistance in order to overcome feelings of inadequacy and the emotional problems and frustrations that their special problems cause.						

Family Members	Recommendation for Removal	Definitely feasible				Definitely unfeasible
190. Family members who provide more assistance than is needed for self improvement	Administrators and instructors can work with families to overcome these barriers	1	2	3	4	5
	Provide counseling and education for the family.	1	2	3	4	5
191. Lack of support and encouragement from the family	Provide family counseling	1	2	3	4	5
	Separate the student from the family	1	2	3	4	5
192. A home environment which discourages or destroys interest or initiative on the part of the student	Family counseling and/or removal of the student to a supportive environment should be implemented.	1	2	3	4	5
193. Family members who adhere to myths and misconceptions of handicapping conditions	Provide for family counseling	1	2	3	4	5
194. Lack of emotional support from significant "others" in social life of the handicapped, i. e., need for sustained encouragement	Use of halfway houses	1	2	3	4	5
	Provide counseling on a regularly scheduled basis.	1	2	3	4	5
195. Some disabled people also have disabled spouses which put an additional burden on the person.						

Barriers within Advocates for Handicapped Persons						
196. Lack of public, administrative, and parental support to encourage handicapped persons to attend technical programs.	Offer a course in Secondary and Post-Secondary schools (for credit) on the subject of "Acceptance of and Victory Over Handicaps". Let all interested students take the course.	1	2	3	4	5
	Provide for family involvement and training.	1	2	3	4	5
197. Inadequate assistance and support which results in fear of entering the world of training and the world of work.	Provide emotional support through counseling and other students.	1	2	3	4	5
	Establish top priorities for rehabilitation services to provide support for handicapped students in early years of training and job experience.	1	2	3	4	5

	Recommendation for Removal	Definitely feasible				Definitely unfeasible
198. Goals which are established by peers and society rather than the individual	Provide student directed counseling	1	2	3	4	5
	Public and private agencies should make more effort to educate the general public.	1	2	3	4	5

APPENDIX I: STEERING COMMITTEE RESPONSES TO RATED TASKS

Letter to Steering Committee

Response Form

For discussion of the information in Appendix I see page 75.

TEXAS A&M UNIVERSITY
COLLEGE OF EDUCATION
COLLEGE STATION, TEXAS 77843

September 19, 1978

CENTER FOR CAREER
DEVELOPMENT AND
OCCUPATIONAL PREPARATION

Dr. Stanton Calvert
College Coordinating Board
Division of Community and
Continuing Education
P. O. Box 12788 Capitol Station
Austin, Texas 78711

Dear Dr. Calvert:

The final analyses of all of the 198 barriers, 351 recommendations for removal of barriers, ratings of severity of barriers and ratings of the feasibility of implementing the recommendations have been completed. These findings have been distilled in twenty-nine tasks identified by the project investigator for purposes of formulating policy or for implementing services and programs for the handicapped students in vocational education programs in community colleges. The tasks have also been rated according to the desirability, feasibility and cost effectiveness of implementing. The tasks and the ratings are presented in the enclosed table entitled:

Desirability, Feasibility and Cost Effectiveness
of Performing Tasks to Remove Barriers

We are asking that each of the Steering Committee Members examine the information, and complete the enclosed response form. The form solicits your agreement or disagreement, and your rating of the task in the event you disagree with the present rating. We will solicit your response by telephone within the next week regarding your agreement or disagreement with the appropriateness of the tasks and the ratings of the tasks according to the desirability, feasibility and cost effectiveness of performing the tasks.

This will complete the Delphi study and your participation. We wish to sincerely thank you for your efforts and support of this study, and we will be sending you a final report of the project soon.

Sincerely,

Joan Jernigan
Principal Investigator

cc: Donald L. Clark
Project Director

JJ/sp

RESPONSE FORM: DESIRABILITY, FEASIBILITY AND COST EFFECTIVENESS OF PERFORMING TASKS TO REMOVE BARRIERS

Instructions: Please examine the current rating, then check whether you agree or disagree; if you disagree, please rate the task based on your own experience, knowledge and background.

Desirability:
1 - Very desirable
2 - Desirable
3 - Undesirable
4 - Very undesirable

Feasibility:
1 - Definitely feasible
2 - Possibly feasible
3 - Possibly unfeasible
4 - Definitely unfeasible

Cost Effectiveness:
1 - Very cost effective
2 - Possibly cost effective
3 - Possibly not cost effective
4 - Definitely not cost effective

General Task	Rating of Desirability to Perform Task				Rating of Feasibility to Perform Task				Rating of Cost-Effectiveness for Performing Task			
	Current Rating	Agree	Disagree	Suggested Rating	Current Rating	Agree	Disagree	Suggested Rating	Current Rating	Agree	Disagree	Suggested Rating
1. Provide for improved and increased counseling services.	1				1				1			
2. Establish inservice programs for the vocational technical and academic community college personnel	1				1				1			
3. Secure funding to provide for programs, services, facilities and equipment	1				1				1			
4. Provide resource persons and support services to assist instructors and students	1				1				1			
5. Plan for individual students	1				1				1			

General Task	Rating of Desirability to Perform Task				Rating of Feasibility to Perform Task				Rating of Cost-Effectiveness for Performing Task			
	Current Rating	Agree	Dis-agree	Suggested Rating	Current Rating	Agree	Dis-agree	Suggested Rating	Current Rating	Agree	Dis-agree	Suggested Rating
6. Provide special materials or programs to accommodate the handicapped.	1				1				2			
7. Conduct public education regarding the capabilities and needs of the handicapped utilizing the news media.	1				1				1			
8. Provide individualized instruction with planned scope and sequence of curriculum and open entry/exit points for students.	1				1				1			
9. Conduct research in areas of needs assessment, employment, materials, and equipment.	1				2				2			
0. Provide pre-service training and teacher preparation in colleges and universities.	1				2				1			
1. Coordinate services with employers in business and industry.	1				2				2			
2. Obtain special or adapted equipment.	1				2				2			

General Task	Rating of Desirability to Perform Task				Rating of Feasibility to Perform Task				Rating of Cost-Effectiveness for Performing Task			
	Current Rating	Agree	Dis-agree	Suggested Rating	Current Rating	Agree	Dis-agree	Suggested Rating	Current Rating	Agree	Dis-agree	Suggested Rating
13. Improve communication and coordination of services between vocational technical programs and agencies.	1				2				2			
14. Obtain legislative support.	1				1				1			
15. Enlist improved and increased services from the Texas Rehabilitation Commission.	1				2				2			
16. Provide for increased interaction between handicapped and non-handicapped students.	1				2				2			
17. Develop a centralized system of resources	1				1				1			
18. Identify instructors' responsibilities for handicapped students.	2				2				2			
19. Provide special materials and curriculum.	1				2				2			
20. Develop policies to provide programs and assistance for the handicapped.	1				2				2			

General Task	Rating of Desirability to Perform Task				Rating of Feasibility to Perform Task				Rating of Cost-Effectiveness for Performing Task			
	Current Rating	Agree	Dis-agree	Suggested Rating	Current Rating	Agree	Dis-agree	Suggested Rating	Current Rating	Agree	Dis-agree	Suggested Rating
21. Develop administrative planning for the handicapped.	1				2				2			
22. Expand and develop programs of vocational education.	1				2				2			
23. Develop career information for the handicapped.	1				2				1			
24. Articulate community college vocational technical programs of instruction with public schools	2				2				2			
25. Solicit assistance from the community.	2				2				2			
26. Teach handicapped students to communicate problems and use resources available.	2				2				1			
27. Develop a method of accountability.	1				1				1			
28. Develop programs for deaf students.	2				2				2			
29. Establish advocacy groups	2				2				2			